toner

cable equipment, inc.

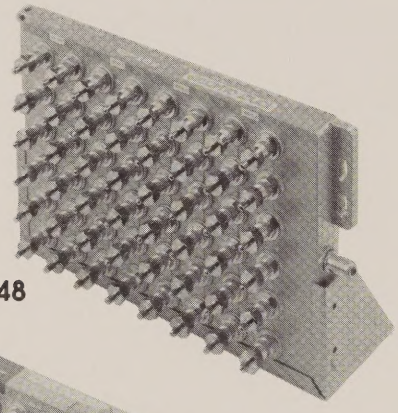
BLONDER TONGUE'S
PAL SYSTEMS
FULL LINE CATALOG

Toner QUADTAP™

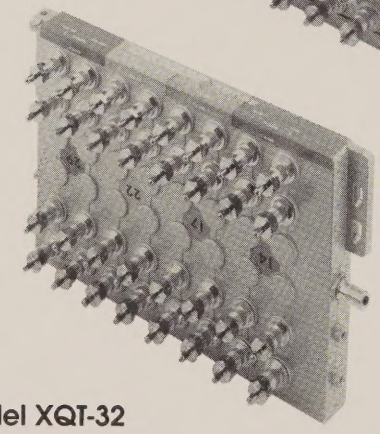
Four Taps in One

A new tap concept to save you time and money.

No need to cascade 8 way taps with expensive housing to housing connectors and F adaptors for 48 subscribers. **TONER'S NEW QUADTAPS™** save you time and money and space.

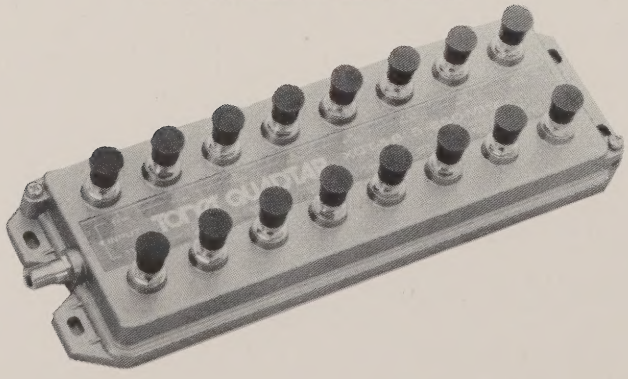


Model XQT-48



Model XQT-32

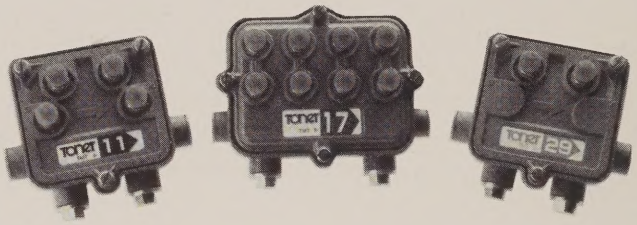
XQT-16 16 PORTS
OF 4 DIFFERENT dB VALUES



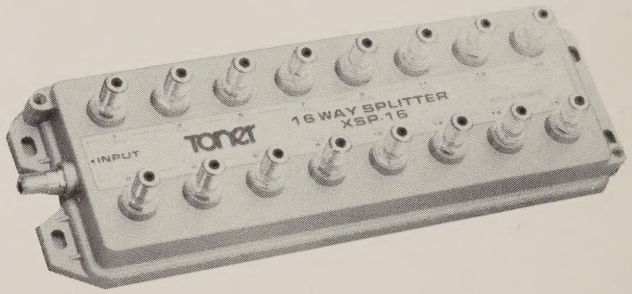
Toner TAPS™

TMT SERIES

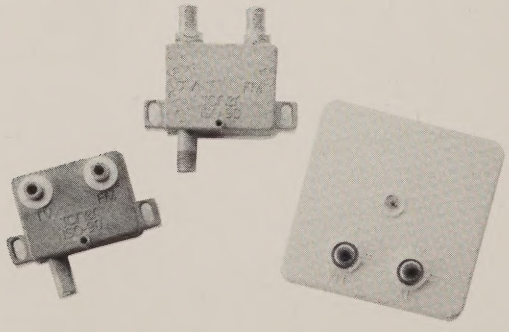
600 MHz 100 dB RFI 2,4 & 8 port MultiTaps



Toner
XSP-16-1 GHZ
16 WAY SPLITTER



Toner
Isolator



Telephone: +1-215-675-2053 Fax: +1-215-675-7543 FREEFONE from the UK: 0800-894969

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PRE-FABRICATED HEADENDS

Blonder Tongue welcomes quotation requests for factory assembly of manufactured products, such as TV system headends. CATV, SMATV and MATV pre-fabricated headends are available for a wide range of system capacities and channel selections. These headends can be tailored to meet special requirements.

Blonder Tongue pre-fabricated headends come complete with all electrical interconnects, hardware and cabling within a sturdy, steel cabinet or rack. All headends are factory pre-tested, tuned and adjusted prior to shipment.

Warranty is limited to a performance guarantee for the individual products in the assembly, and the system performance specifications measured at the factory.

ENGINEERING SYSTEM DESIGN POLICY

Blonder Tongue will provide free CATV/SMATV/MATV system design layouts for customers who order the products specified in the system design. Revisions to the original design may be subjected to engineering fees.

TV STANDARDS

This catalog covers products applicable to PAL B/G, PAL I, and PAL D/K TV standards. The customer must specify the PAL system for his/her application.

Products are available with USA power plugs, Continental two prong plugs and U.K. style 3-prong plugs.

BID SUBMITTALS

Individual product Specification Sheets are available at no charge for use when submitting bids on Blonder Tongue products.

SPECIAL PRODUCT QUOTATIONS

Blonder Tongue invites quotation requests for custom designed products, and modifications of standard products.

ENGINEERING CHANGES

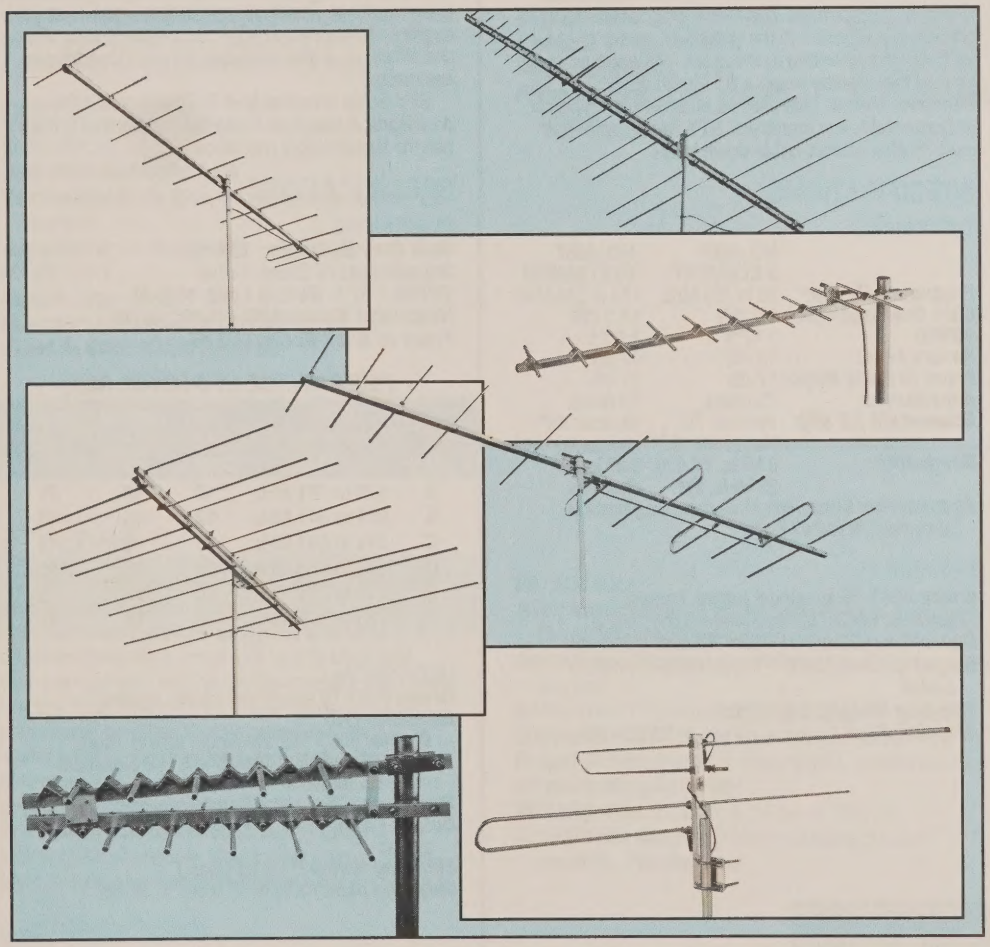
Blonder Tongue, in order to provide its customers with products embodying the latest technological advances, reserves the right to make revisions in current production models. New specifications affected by such changes may not appear in this catalog.

Specifications in this catalog are all Typical unless otherwise noted and all specifications are subject to change without notice.

BTY ANTENNA FAMILY

Blonder Tongue offers a line of professional TV and FM antennas designed for CATV and private cable installations. These antennas provide high quality and high gain performance. The BTY antenna line is designed to withstand 200 KPH winds and extreme weather conditions.

A variety of mounting arrangements are possible with optional hardware available including the ability to build an array for VHF low signal strength applications.



BTY ANTENNA FEATURES

- Antennas constructed to withstand 200 KPH winds when properly installed.
- Hard drawn 6063-T6, heavy duty aluminum boom for added strength.
- Square boom design assures positive lock with mast mounting bracket.
- Elements are securely affixed to the boom with an aluminum top clamp, mounting screw and bottom locknut plate. This provides optimum element alignment while preventing rotation.
- Patented off-center driven elements provide excellent 75 ohm match without use of fragile capacitors.
- Heavy duty bracket has serrated teeth for added grip to mast.
- Bracket accepts mast sizes up to 6.35 cm in outside diameter.
- Blonder Tongue Cantilever Mount available for rear mounting on a tower or mast. Unique design permits vertical or horizontal orientation of antenna.

BLONDER TONGUE ANTENNA MODELS

MODEL/ STOCK NO.	DESCRIPTION	PAGE
BTY-5 4866	5 Element Single Channel Low Band VHF & FM	4
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BTY-LP-LB 4872	8 Element Broadband Low Band VHF	5
BTY-LP-HB 4871	10 Element Broadband High Band VHF	5
BTY-LP-BB 4874	12 Element Broadband 40-230 MHz	6
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BTY-2-FM 4878	FM Omni Antenna	7
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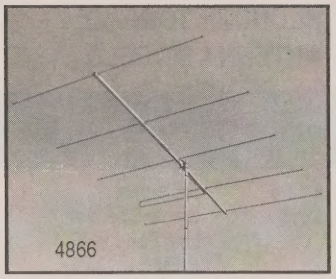
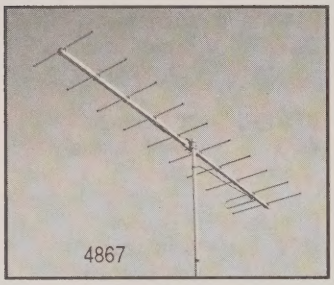
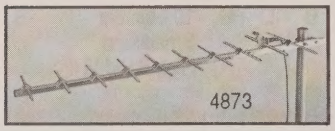






BTY-5-LB
Stock No. PAL I: J4866(*)
PAL B: B4866(*)
PAL D: D4866(*)

BTY-10-HB
Stock No. PAL I: J4867(*)
PAL B: B4867(*)
PAL D: D4867(*)

BTY-5-FM
Stock No. 4866-FM

- High Gain
- Low Sidelobes
- Fiber Filled to Dampen Vibration
- Cantilever Mount Available

BTY-10-U
Stock No. PAL I: J4873(*)
PAL G: B4873(*)
PAL K: D4873(*)

- Rear Mounting Simplifies Tower Mounting
- All UHF Channels covered with 6 Models

(*) Specify Channel or video carrier frequency

BTY-5-LB BTY-10-HB BTY-5-FM

BTY series single channel 5 and 10 element antennas are high quality, professional VHF/FM antennas for any VHF channel or the FM band. NOTE: (BTY-FM antenna has two driven dipoles for a total of six elements.) They are designed with a two piece boom to reduce freight and handling costs. BTY VHF antennas feature high gain and a narrow beamwidth at the individual channel. Two piece, square boom construction and end-sealed aluminum elements provide added strength, excellent wind resistance and exceptional weathering properties. The heavy duty mounting bracket is positioned at the antenna's center of gravity for balanced mounting to the mast. The antenna can be rear mounted by using a BT Model #5760 Cantilever Mount. This permits attachment to vertical or horizontal tower members. BTY Series antennas feed 75 ohm coaxial cable down leads.

SPECIFICATIONS

ELECTRICAL

	NO. 4866 5 ELEMENT	NO. 4867 10 ELEMENT
Frequency Range:	49 to 108 MHz	174 to 230 MHz
Gain Over Isotropic:	9.2 dBi	13.2 dBi
VSWR:	1.67:1	1.33:1
Return Loss:	12 dB	17 dB
Front to Back Ratio:	17 dB	17 dB
Impedance:	75 ohms	75 ohms
Beamwidth (-3 dB):	Vertical: 70° Horizontal: 63°	Vertical: 49° Horizontal: 51°
Bandwidth:	8 MHz, TV chs. 23 MHz, FM	8 MHz, TV channels

Accessories Supplied: Mast mounting bracket assembly, Weather Boot.

MECHANICAL

Boom: 6063-T6 aluminum tubing, square
Elements: 6063-T52 aluminum tubing, round
Operational/Survival Wind Velocity: 200 kph
Output Connector: 1-"F" Type female, weather sealed
Shipping Weight: 6 kg (Max.)
Shipping Size: 10 cm x 15 cm x 200 cm (Max.)

BTY-10-U

Blonder Tongue BTY-10-U Series single channel, 10 element antennas are high-quality professional UHF antennas. They are available for any UHF channel to 806 MHz. BTY antennas feature high gain and a narrow beamwidth at the individual channel. Single piece, square boom construction and aluminum elements provide added strength, excellent wind resistance, and exceptional weathering properties.

The heavy duty mounting bracket, positioned at the rear, allows the antenna to be mounted directly to vertical tower members. This feature maximizes signal reception qualities of the antenna by keeping elements clear of support structures. It also eliminates the need for outriggers and masts.

BTY Series antennas feed 75 Ohm coaxial cable downleads. A male type F connector is required to mate with the female output connector.

SPECIFICATIONS

ELECTRICAL

Gain Over Isotropic: 12.6 dBi;
Impedance: 75 Ohms, Unbal
VSWR: 1.37:1 ***Return Loss:*** 16.2 dB
Horizontal Beamwidth (-3 dB): 46.0°
Front to Back Ratio: 17.2 dB

PERFORMANCE BY CHANNEL (MIN.)

BAND	FREQUENCY RANGE	GAIN (dB) (DIPOLE)	RETURN LOSS (dB)	FRONT TO BACK RATIO (dB)
A	470 to 501 MHz	10	18	21
B	501 to 541 MHz	12	16	16
C	541 to 597 MHz	11	18	19
D	597 to 653 MHz	10	16	20
E	653 to 725 MHz	10	15	18
F	725 to 805 MHz	10	14	14

MECHANICAL

Boom: 6063-T6 aluminum tubing, square
Elements (10)
Dipole: 6063-T52 aluminum tubing, round
Reflector & Director: 6063-T52 aluminum tubing, round
Operational/Survival Wind Velocity: 200 kph
Output Connector: 1-"F" Type female, weather sealed
Shipping Weight: 1.9 kg (Max.)
Shipping Size: 127 cm x 9 cm x 34 cm

BTY-LP-LB

The Blonder Tongue BTY-LP-LB is a professional quality VHF Lo-Band antenna. It is an 8 element broadband multi-channel design for TV Channels in the 40 to 88 MHz range with a 75 ohm output for coaxial cable. This antenna has high gain, flat response, good VSWR, high front-to-back ratio, narrow beamwidth and low side lobes. The antenna is a log periodic with a dual boom preassembled into a single piece permitting less expensive shipment, easier handling and reduced shelf space. The heavy duty center mount is positioned at the antenna's center of gravity for balanced weight distribution to the mast.

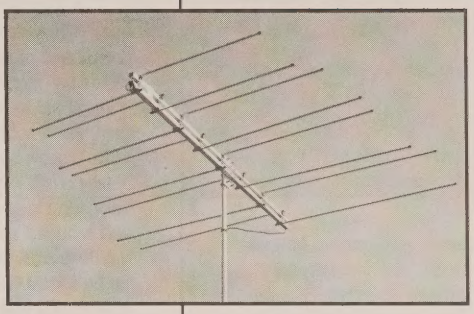
SPECIFICATIONS

ELECTRICAL

Gain Over Isotropic: 9 dB
Bandwidth: 40-88 MHz, 1/4 dB flatness across one channel.
Impedance: 75 ohms Unbal.
VSWR: 1.5:1
Return Loss: 14 dB
Horizontal Beamwidth (-3 dB): 57°
Front to Back Ratio: 22 dB Min.

MECHANICAL

Wind Resistance: 35 kg @ 160 kph sustained wind
Operational/Survival Wind Velocity: 200 kph
Boom: 6063-T6 aluminum tubing, square
Elements: 6063-T52 aluminum tubing, round
Output Connector: 1 "F" Type female, weather sealed
Shipping Weight: 7.5 kg
Shipping Size: 11 cm x 16 cm x 255 cm



BTY-LP-LB
Stock No. PAL I: J4872
PAL B: B4872
PAL D: D4872

BTY-LP-HB
Stock No. PAL I: J4871
PAL B: B4871
PAL D: D4871

ANTENNAS

- End-sealed Elements for Maximum Vibration Dampening
- Specially Designed Clamps Insure Contact of Elements to Boom
- Short Boom Reduces the Wind Resistance
- Heavy Duty Mounting Bracket Accepts Mast Sizes up to 6.35 cm Outside Diameter
- BT Cantilever Mount Available For Rear-end Mounting on Tower or Mast

BTY-LP-HB

The Blonder Tongue BTY-LP-HB is a high quality professional, Hi-Band antenna. It has a 10 element broadband multi-channel design for highband VHF channels (frequency range 174 to 230 MHz) and features high gain and narrow beamwidth. The output feeds a 75 ohm downlead. The antenna has a two piece boom permitting less expensive shipment, easier handling and reduced shelf space. The heavy duty mounting bracket is positioned at the antenna's center of gravity for balanced mounting to the mast. The antenna can be rear mounted by using a BT Model #5760 Cantilever Mount. This permits attachment to vertical or horizontal tower members.

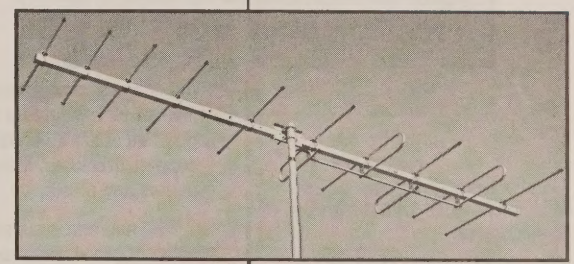
SPECIFICATIONS

ELECTRICAL

Frequency Range: 174 to 230 MHz
Gain Over Isotropic: 13.2 dBi (174 MHz); 12.2 dBi (230 MHz)
Bandwidth: 174-230 MHz 1/2 dB flatness
Front to Back Ratio: 20 dB
Impedance: 75 ohms
VSWR: 1.65:1
Return Loss: 12 dB
Horizontal Beamwidth (-3 dB): 50° (174 MHz); 42° (230 MHz)

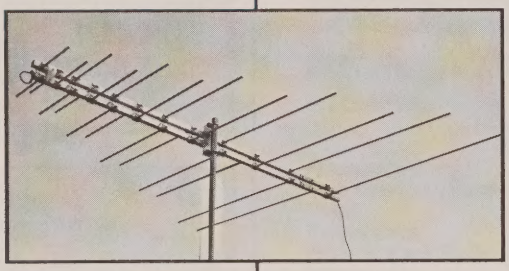
MECHANICAL

Wind Resistance: 24 kg (No Ice); 35 kg (1.3 cm Ice) @ 160 kph sustained wind
Operational/Survival Wind Velocity: 200 kph (No Ice)
Boom: 6063-T6 aluminum tubing, square
Elements: 6063-T52 aluminum tubing, round
Output Connector: 1-"F" Type female, weather sealed
Shipping Weight: 5.5 kg
Shipping Size: 11.5 cm x 14 cm x 186 cm
Accessories Supplied: Mast mounting bracket assembly, Weather Boot



BTY-LP-BB ANTENNA
Stock No. PAL I: J4874
PAL B: B4874
PAL D: D4874

- End-sealed Aluminum Elements are Fiber Filled for Maximum Vibration Dampening
- BT Cantilever Mount Available for Rear-end Mounting on Tower or Mast
- Becomes All-Channel Antenna When BT UHF Broadband Antenna is Attached



BTY-LP-BB

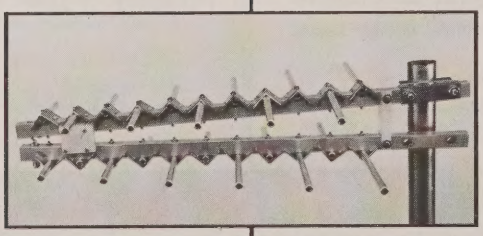
The Blonder Tongue BTY-LP-BB is a professional quality VHF broadband antenna. It is a 12 element broadband multi-channel design to cover all VHF TV channels (frequency range 40 to 230 MHz) with a 75 ohm output for coaxial cable. This antenna has high gain, flat response, good VSWR, high front-to-back ratio, narrow beamwidth and low side lobes. The antenna is a log periodic with a shortened dual boom, permitting less expensive shipment, easier handling and reduced shelf space. The heavy duty center mount is positioned at the antenna's center of gravity for balanced weight distribution to the mast. The antenna can be rear mounted by using a BT Model #5760 Cantilever Mount. This permits attachment to vertical or horizontal tower members. The front of the BTY-LP-BB antenna has been fabricated to permit mounting of a BTY-UHF-BB antenna. Joining the two will create an all-channel antenna.

SPECIFICATIONS

ELECTRICAL
Gain Over Isotropic: 8.2 dB
Bandwidth: 40 to 230 MHz, 1 dB flatness across one channel
Impedance: 75 Ohms Unbalanced
VSWR: 1.62:1
Return Loss: 12 dB
Horizontal Beamwidth (-3 dB): 70°
Front to Back Ratio: 18 dB

MECHANICAL
Maximum Element Width: 391 cm
Boom Length: 275 cm
Turning Radius: 205 cm
Wind Resistance: 36 kg @ 160 kph sustained wind
Operational/Survival Wind Velocity: 200 kph
Boom: 6063-T6 aluminum tubing, square
Elements: 6063-T52 aluminum tubing, round
Output Connector: 1-"F" Type female, weather sealed
Shipping Weight: 9 kg
Shipping Size: 10 cm x 14 cm x 241 cm

BTY-UHF-BB ANTENNA
Stock No. 4875



- Can Be Used as Stand-alone or With BTY-LP-BB for All-channel Configuration
- Elements are Affixed to the Aluminum Boom With a 5 cm x 2.4 cm Thick Mounting Clamp
- Antenna is Completely Pre-Assembled, Ready for Mounting

BTY-UHF-BB

The Blonder Tongue BTY-UHF-BB is a professional quality UHF broadband antenna. It is an 11 element multi-channel design to cover the full UHF TV band (frequency range 470 to 890 MHz) with a 75 ohm output for coaxial cable. The antenna is a dual boom log periodic type with high gain, flat response, good VSWR, high front-to-back ratio, narrow beamwidth and low side lobes.

The mounting assembly, positioned at the rear, allows the antenna to be mounted directly on vertical tower members. This feature maximizes signal reception qualities of the antenna by keeping elements clear of support structures. It also eliminates the need for outriggers and masts.

The antenna is supplied with hardware for mounting either of two ways; attaching to a mast (or tower), or attaching to the front of a BTY-LP-BB (#4874) VHF broadband antenna. The two antenna combination produces a single broadband U/V antenna version for all VHF and UHF channels. A male type F connector is required to mate with the female output connector.

SPECIFICATIONS

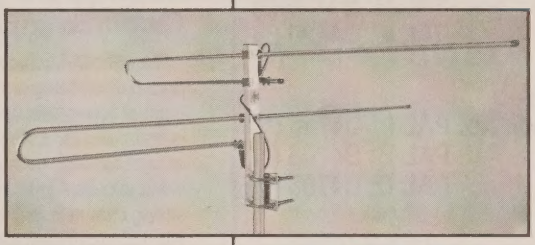
ELECTRICAL
Gain Over Isotropic: 10.2 dB
Bandwidth: 470-890 MHz, 2 dB Flatness
Impedance: 75 Ohms, Unbalanced
VSWR: 1.67:1
Return Loss: 12.0 dB
Horizontal Beamwidth (-3 dB): 62°
Front to Back Ratio: 18.0 dB

MECHANICAL
Boom Length: 61 cm
Number of elements: 11
Turning Radius: 57 cm
Boom: 6063-T6 Aluminum Tubing, square
Elements: 6063-T6 Aluminum Tubing, round
Operational/Survival Wind Velocity: 200 kph
Wind Resistance: 6.2 kg (DRY) 14 kg (1.3 cm ICE) @ 160 kph
Connector: "F" Type female, weather sealed
Shipping Weight: 2.5 kg
Shipping Size: 38 cm x 13 cm x 71 cm

BTY-2-FM

BTY-2-FM
Stock No. 4878

The BTY-2-FM is a twin dipole FM antenna. Two 1/2 wave dipole elements mounted 90 degrees to one another on the antenna mast give this antenna an omnidirectional reception pattern. The antenna is supplied complete with two dipoles, connector cable, a 45 cm boom and universal mounting bracket. It is designed for mounting to either vertical or horizontal tower members and will attach to masts up to 6.4 cm in diameter.



- End Sealed Aluminum Elements Provide Vibration Damping
- All Necessary Hardware and Brackets Supplied
- Full 88-108 MHz Coverage - Flat Response
- Horizontal or Vertical Mounting, Universal Bracket Supplied
- 360° Beamwidth

SPECIFICATIONS

ELECTRICAL

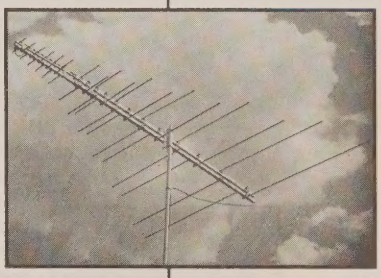
Gain over Isotropic: 2.2dB
Bandwidth: 88 to 108 MHz
Impedance: 75 Ohms, unbalanced
Return Loss: 12dB
Beamwidth: 360° Azimuth

MECHANICAL

Boom Length: 46 cm
Number of Elements: 2
Turning Radius: 74 cm
Length of Longest Element: 150 cm
Boom: 6063-T6, aluminum Tubing, square
Elements: 6063-T52, Aluminum Tubing, round
Operational/Survival Wind Velocity: 200 kph
Connector: "F" Type Female, weather sealed
Shipping Size: 10 cm x 14 cm x 152 cm
Shipping Weight: 1.4 kg

UHF/VHF ANTENNA

A BTY UHF/VHF Broadband multi-channel antenna can be formed by adding a BTY-UHF-BB (4875) antenna to the front of a BTY-LP-BB antenna (Stock No. 4874). Each antenna must be ordered separately. This combination creates a single broadband U/V antenna configuration covering the VHF and UHF bands. Mounting hardware and detailed instructions are included with each BTY-UHF-BB antenna.

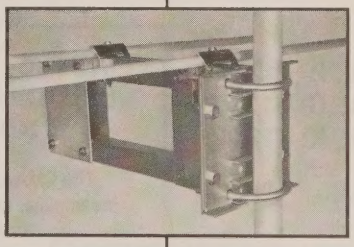


4874/4875

CANTILEVER ANTENNA MOUNT

CANTILEVER
ANTENNA MOUNT
Stock No. 5760

The Blonder Tongue Model 5760 Cantilever Mount consists of a heavy duty square aluminum boom and all clamping hardware required for rear-end mounting of Blonder Tongue antennas, Nos. 4866, 4867, 4871, 4872, and 4874. Cantilever end-mounting is common since the antennas are usually attached to tower legs rather than to masts. This maximizes signal reception qualities of the antenna by keeping elements clear of support structures. It also eliminates the need for outriggers and masts. Antennas can be mounted horizontally or vertically on a tower leg or mast (3.2 cm to 6.4 cm OD) by rotating the mounting plate 90°. The cantilever is designed to be mounted parallel to and below the antenna boom. Boom is square aluminum tubing (6063-T6), 164 cm long. Mounting plates and brackets are stainless steel. Shipping weight is 3.8 kg. The mount has a wind resistance of 26.5 kg @ 160 kph.

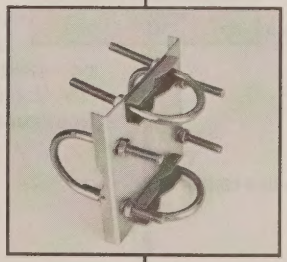


BTY-MC STACKING ANTENNA MOUNTING CLAMP

BTY-MC
Stock No. 4879

The BTY-MC is a heavy duty stainless steel antenna mounting clamp designed for stacking BTY antennas. The resultant arrays improve antenna gain for use in fringe areas. The Model 4879 has excellent weathering properties and exceptional strength. The number of clamps needed is dependent on the number of antennas stacked (i.e. a 2 antenna array uses 3 clamps, a 4 antenna array uses 6 clamps).

The mounting clamp is shipped completely pre-assembled and has a compact design (15 cm x 15 cm x 3.5 cm) for ease of mounting. Four 1 cm U-Bolts will accept mast tubing up to 6.4 cm O.D. Shipping weight is only 1.1 kg.



Antenna Preamplifiers
Professional Single Channel & Broadband

SCMA-Ub
Stock No. PAL I: J4426 (*)
PAL G: B4426 (*)
PAL K: D4426 (*)

CMA-b
Stock No. PAL I: J4706 (*)
PAL B: B4706 (*)
PAL D: D4706 (*)

- Very Low Noise Figure
- Excellent Gain, Flat Response
- Best Adjacent Channel Overload Rejection
- Adapter Supplied for Aluminum Cable Connector
- Built-in Output Test-Jack Permits Uninterrupted Service
- Mounting Hardware Supplied
- Ideal for BTY Single Channel Antennas

SCMA-Ub UHF SINGLE CHANNEL PREAMPLIFIER

The SCMA-Ub is a single channel very low noise preamplifier designed for mounting on an antenna mast or tower structure. The noise figure of each unit is optimized for a single UHF channel. This preamplifier features high gain and selectivity. It therefore provides excellent immunity to overloads caused by other strong channels in the UHF band. A factory tuned internal trap frequency may also be specified to prevent overload or intermodulation problems from strong, local channels without significant noise figure degradation.

Circuitry is mounted in a rugged, die-cast aluminum case. The SCMA-Ub has 75-ohm "F" Type input and output connections. An adapter is supplied to permit the use of an aluminum cable connector at the Output.

SPECIFICATIONS

Bandwidth: Any 8 MHz channel in the 470 to 860 MHz range

Noise Figure: **470 to 806 MHz:** 2.5 dB; **806 to 860 MHz:** 3.5 dB

Gain: **470 to 596 MHz:** 25 dB; **597 to 806 MHz:** 24 dB; **806 to 860 MHz:** 22 dB

Trap Depth: 10 dB

Customer specified trap frequency may be preset from 470 to 860 MHz but no closer to desired UHF channel than -2 channels or +3 channels for no degradation of performance.

Minimum Recomended Input for TASO Grade 1 (Excellent) Picture (46 dB S/N):
470 to 806 MHz: +49.3 dBμV (290 uV);
806 to 860 MHz: +50 dBμV (316 uV)

Input Capability (In band spurious @ -55 dB, sound @ -15 dB, color @ -25 dB): 95 dBμV

Power Requirement: -21 VDC regulated @ 28.6 mA. Recommended power supply: BT Model 1526

Dimensions: 13cm x 10cm x 8cm

Shipping Weight: 0.6 kg

Connectors:
Input and Output: "F" Type female;
Output Test Point: "F" Type female

CMA-b VHF & FM SINGLE CHANNEL PREAMPLIFIER

The CMA-b is a low noise, single channel VHF preamplifier. The unit accepts a wide range of input signal levels making it ideal for headend installations. The unit has exceptional immunity to overloads caused by strong adjacent channel signals. Each unit has 75-ohm "F"-Type connectors on the input, output, and test jack. The -20 dB output monitor jack (back-matched) permits the unit's performance to be checked without interrupting service. A rugged, cast aluminum case and a glass epoxy printed circuit board assure long life and reliable operation. Mast-mounting hardware is supplied.

SPECIFICATIONS

Noise Figure: **47 to 88 MHz:** 3.5 dB; **170 to 230 MHz:** 2.5 dB; **FM:** 2.0 dB

Gain: **47 to 88 MHz:** 29 dB; **170 to 230 MHz:** 26 dB; **FM:** 24 dB

Selectivity: 12 dB down 12 MHz from channel center

Bandpass Flatness: 8 MHz ±0.25 dB, **FM** 1.0 dB

Minimum Recommended Input for TASO Grade 1 (Excellent) Picture: +50 dBμV

Operating Temperature: -40° to 60°C

Power Requirements: -21 VDC at 40 mA. Recommended power supply: BT Model 1526.

Connectors:
Input and Output: "F" Type female;
Output Test Point: "F" Type female

Dimensions: 13cm x 10cm x 6cm

Shipping Weight: 0.6 kg

CMA-Uc
Stock No. PAL I: J1264(*)
PAL G: B1264(*)
PAL K: K1264(*)

- Low Noise Figure
- Excellent Gain with High Input Capability
- Built-in Output Test Jack Permits Uninterrupted Service
- Heavy-duty Die-cast Aluminum Construction
- Ideal for BTY Broadband Antennas

CMA-Uc BROADBAND UHF PREAMPLIFIER 3.5 dB NOISE FIGURE, 20 dB GAIN

The CMA-Uc is a very low noise broadband UHF-TV preamplifier designed for antenna mast mounting. This preamplifier can be used for all UHF channels, 470 to 900 MHz. The CMA-Uc features excellent gain, which is relatively uniform across the entire UHF-TV band, a low noise figure and high output capability.

The circuitry is housed in a rugged, die-cast aluminum case designed to be mounted on a TV antenna mast or on the side of a tower structure with the U-bolt and bracket supplied. CMA-Uc preamplifiers are equipped with 75-ohm "F" Type input and output connectors.

SPECIFICATIONS

Bandwidth: 470 to 900 MHz

Noise Figure: 3.0 dB (3.5 dB @ 900 MHz)

Gain: 20 dB

Flatness: 1.5 dB, 470-900 MHz

Minimum Recommended Input for TASO Grade 1 (Excellent) picture 46 dB S/N: +51 dBμV

Input Capability (3 Ch. Xmod @ -46 dB): 86 dBμV

Power Requirement: -21 VDC regulated @ 28.6 mA, diplexed on downlead. BT #1526 Power Supply recommended.

Operating Ambient Temperature Range: -40°C to +60°C

Dimensions: 13cm x 10cm x 6cm

Shipping Weight: 0.6 kg

Connectors
Input and Output: "F" Type female
Output Test Point (-20 dB backmatched): "F" Type female

(*) Specify Channel or video carrier frequency

The Blonder Tongue CESR-b model #B6165 is a commercial grade, high performance, rack mounted Satellite Receiver. Provided with frequency agile synthesized tuning, it is compatible with both C Band and Ku Band reception. The CESR-b incorporates the latest in solid state techniques with a PLL demodulator that provides crisp, clear, noise-free video.

Baseband video and audio outputs are available for use with either the Blonder Tongue MAVM-s modulator or other compatible units. Three video outputs are provided; one for unscrambled programming and two more for use with descramblers.

Front panel synthesized tuning is settable in 0.25 MHz increments using DIP switches. The front panel also features a relative signal strength meter, and a switch for selecting either a preset 6.65 MHz or tuneable audio subcarrier.

SPECIFICATIONS

ELECTRICAL

RF

Input Band: 950 to 1750 MHz
Frequency Selection: Front panel settable DIP switches; selectable locked or fine tuned AFC with ±5 MHz range
Input Impedance: 75 Ohms Nominal
Input Level Range: -60 dBm to -25 dBm

IF

Center Frequency: 70 MHz
Bandwidth: 27 MHz at -3 dB (Field replaceable with 16, 18, 20 or 25 MHz bandwidth unit)
Static Threshold: Less than 8 dB C/N
Loop: 75 Ohm +100 dBμV nominal

VIDEO

Format: Compatible with PAL B/G, PAL I or PAL D/K formats
Polarity: Switchable; Standard or inverted video
De-emphasis: Field programmable for PAL or NTSC
Dispersion Removal: Greater than 40 dB (Clamped Video Out to Modulator)
Output Level: Adjustable 1 V p-p, ±3 dB
Non Linear Distortion
- ***Differential Gain:*** Less than 3% from 10% to 90% APL
- ***Differential Phase:*** Less than 2 degrees from 10% to 90% APL

Chrominance to luminance Inequality
- ***Gain:*** Less than 0.3 dB
- ***Delay:*** Less than 25 nSec.

Video Outputs
- ***Standard:*** De-emphasized, Clamped, Filtered video; 25 Hz to 5.5 MHz ±1 dB
- ***Flat:*** Not de-emphasized, Unclamped, Unfiltered
  Response: 25 Hz to greater than 8 MHz
- ***Composite:*** De-emphasized, Unclamped, Unfiltered
  Response: 25 Hz to greater than 8 MHz

AUDIO

Subcarrier Tuning Range (Switchable)
- ***Preset:*** 6.65 MHz
- ***Tuneable:*** 5.4 to 8.2 MHz Minimum

De-emphasis: Field programmable with jumper J17, 50μ sec or 75μ sec
Frequency Response: 30 Hz to 15 KHz ±1 dB
Audio IF Bandwidth: Switchable 330/110 KHz
Output
- ***Impedance:*** Low, Unbalanced
- ***Level:*** 0 dBm Nominal

GENERAL

LNB Supply Output: +17 VDC Nominal at 250 mA Maximum
Receiver Requirements: 200 to 264 VAC 50 Hz, 15 Watts

MECHANICAL

Operating Temperature: 0° to 40° Celsius-ambient
Dimensions: 48cm x 25.4cm x 4.4cm
Shipping Weight: 3.6 kg

OPTIONS

1. IF Bandwidth Options: 3 dB bandwidth available, 16, 18, 20 or 25 MHz-Field replaceable

2. Stereo Audio Option

3. Synthesized 2nd Audio Option (5 KHz increments)

CESR-b COMMERCIAL EARTH STATION RECEIVER Stock No. B6165 (*)

- Synthesized Tuning (0.25 MHz Increments)
- C and Ku-Band Compatible
- Preset 6.65 MHz or Tunable Audio Subcarrier
- 8 dB Threshold C/N
- Signal Strength Indicator
- 70 MHz IF Loop

(*) Specify power plug (i.e. UK, Continental or U.S.)

FAVM-450
FREQUENCY AGILE MODULATOR
Stock No. PAL I: J5966(*)
PAL B: B5966(*)
PAL D: D5966(*)

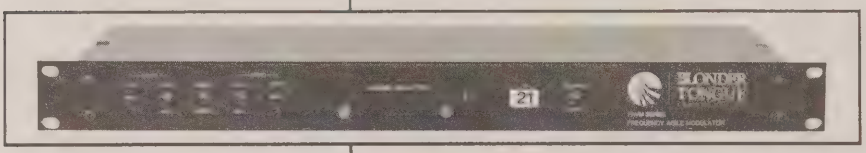
- Provides Output for Any TV Channel from 47 to 450 MHz, in 12.5 KHz increments
- Saw Filtered for Optimum Spurious Reduction
- PLL Synthesizers in Both Conversion Oscillators
- Protected Against Lightning and Line Surges

(*) Specify power plug (i.e. UK, Continental or U.S.)

The Blonder Tongue Model FAVM-450 is a frequency agile heterodyne audio and video modulator. It accepts video and audio baseband inputs from any source, (such as a satellite receiver or demodulator) and provides a modulated video and audio RF carrier output on any channel in the frequency range 47 to 450 MHz. Any standard output channel can be selected by setting a total of 10 switches of the 10-position DIP switch located behind an access door on the front panel of the unit.

The overall channelization configuration of the FAVM-450 can be changed from standard to any offset by resetting a DIP switch, reached through an access door on the top cover. Inverted (or any offset, in 12.5 KHz increments) assignments can be readily implemented.

The FAVM-450 is designed to fit a standard EIA equipment rack and takes only 1/2 of one normal rack space.



SPECIFICATIONS

RF

Frequency Range: Any TV channel within 47-450 MHz range (Standard TV, inverted and inverted offset) in 12.5 KHz increments.
Output Level: +105 dBμV
Output Level Range: 10 dB (continously adjustable)
Audio/Video Carrier Ratio Control: -10 dB to -22 dB (continously adjustable)
Video Carrier Frequency Tolerance: 10 KHz
Audio Carrier Frequency Setting: 5.5 (or 6 or 6.5) MHz from video carrier ±1 KHz
Channel Passband Response: 1 dB P/V
Out of Channel Noise: -73 dBc
Spurious Output (except for video sidebands) at 105 dBuV: -63 dBc. (A/V carrier ratio = -15 dB)
Output Return Loss: 12 dB
IF Output Level: Internally set at 88 dBμV
IF Output Return Loss: 12 dB

VIDEO

Video Input for 87.5% Depth of Modulation: 1.0 Vp-p
Video Input Return Loss: 20 dB
Video Carrier to Noise Ratio: 60 dB
P-P Video to RMS Hum Ratio: 60 dB
Differential Gain @ 87.5% Modulation: 0.25 dB
Differential Phase @ 87.5% Modulation: 1.5°

AUDIO

Input Audio for 50 KHz Peak Deviation (@400 Hz): 140 mVRMS
Audio Overmodulation LED Indicator (monaural only): 50 KHz ±2 KHz
Intercarrier Stability: ±2.5 KHz, 0°C to 50°C
Input Impedance: 10K, Unbalanced
Frequency Response 50 Hz -15 KHz (monaural, with 50 us preemphasis): ±0.5 dB
Harmonic Distortion 50 KHz Deviation, (monaural): 0.5%
Audio Hum and Noise: -60 dB

GENERAL

Power Requirements: 207-253 VAC, 50 Hz, 0.315A Fuse, SLO BLO
Temperature Range: 0°C to 50°C
Power Consumption: 17W

MECHANICAL

Dimensions: 48cm x 4.5cm x 36cm
Shipping Weight: 4 kg
Connectors:
Audio In: RCA phono; ***Video In:*** "F" Type
RF Out: "F" Type; ***IF; In & Out:*** "F" Type

OPTIONS

1. ***+120 dBuV Output:*** Specify an FAVM-450-60-I (or B/G or D) Stock No. 5967
2. ***40 to 600 MHz Frequency Range:*** Specify FAVM-600-I (or B/G or D) Stock No. B5972 Also available in +120 dBμV version. Order as Stock No. B5973.

The Blonder Tongue Model FAVM-860 is a frequency agile heterodyne audio and video modulator. It accepts video and audio baseband inputs from any source, (such as a satellite receiver or demodulator) and provides a modulated video and audio RF carrier output on any channel in the frequency range 470 to 860 MHz. Any standard output channel can be selected by setting a total of 10 switches of the 10-position DIP switch located behind an access door on the front panel of the unit.

The overall channelization configuration of the FAVM-860 can be changed from standard to any offset by resetting a DIP switch, reached through an access door on the top cover. HRC, IRC, or inverted (or any other offset, in 12.5 KHz increments) assignments can be readily implemented.

The FAVM-860 is designed to fit a standard EIA equipment rack and takes only 1/2 of one normal rack space.

SPECIFICATIONS

RF

Frequency Range: Any TV channel within 470-860 MHz range (Standard TV, inverted and inverted offset) in 12.5 KHz increments.
Output Level: +100 dBµV
Output Level Range: 10 dB (continously adjustable)
Audio/Video Carrier Ratio Control: -10 dB to -22 dB (continously adjustable)
Video Carrier Frequency Tolerance: ±25 KHz
Audio Carrier Frequency Setting: Relative to video carrier ±2 KHz
Channel Passband Response: ±0.75 dB
Out of Channel Noise: -80 dBc
Spurious Output (except for video sidebands) at 100 dBuV: -60 dBc. (A/V carrier ratio = -15 dB)
Output Return Loss: 12 dB
IF Output Level: Internally set at 88 dBµV
IF Output Return Loss: 12 dB

VIDEO

Video Input for 87.5% Depth of Modulation: 1.0 Vp-p
Video Input Return Loss: 18 dB
Video Carrier to Noise Ratio: 60 dB
P-P Video to RMS Hum Ratio: 60 dB
Differential Gain @ 87.5% Modulation: 0.25 dB
Differential Phase @ 87.5% Modulation: 1°

AUDIO

Input Audio for 50 KHz Peak Deviation (@400 Hz): 140 mVRMS
Audio Overmodulation LED Indicator (monaural only): 50 KHz ±5 KHz
Intercarrier Stability: ±2.5 KHz, 0°C to 50°C
Input Impedance: 10K, Unbalanced
Frequency Response 50 Hz -15 KHz (monaural, with 50 us preemphasis): ±0.5 dB
Harmonic Distortion 50 KHz Deviation, (monaural): 0.5%
Audio Hum and Noise: -60 dB

GENERAL

Power Requirements: 207-253 VAC, 50 Hz, 0.315A Fuse SLO BLO
Temperature Range: 0°C to 50°C
Power Consumption: 17W

MECHANICAL

Dimensions: 48cm x 4.5cm x 36cm
Shipping Weight: 4 kg
Connectors:
Audio In: RCA phono; ***Video In:*** "F" Type
RF Out: "F" Type; ***IF; In & Out:*** "F" Type

FAVM-860 FREQUENCY AGILE MODULATOR

Stock No. PAL I: J5970(*)
PAL G: B5970(*)
PAL K: D5970(*)

- Provides Output for Any TV Channel from 470 to 860 MHz, in 12.5 KHz increments
- Saw Filtered for Optimum Spurious Reduction
- PLL Synthesizers in Both Conversion Oscillators
- Protected Against Lightning and Line Surges

BAVM AUDIO/VIDEO MODULATOR

Stock No.

PAL I: J5991(*)(**)
PAL B: B5991(*)(**)
PAL D: D5991(*)(**)

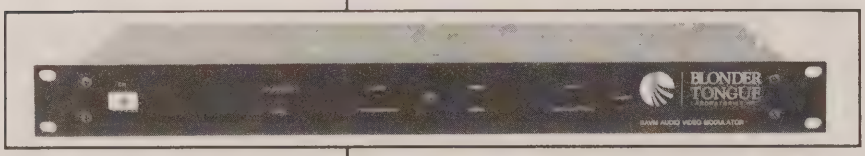
- Proper Vestigial Sideband Selectivity for Adjacent Channel Systems
- Video and Audio Level Controls

(*) Specify video carrier frequency or channel

(**) Specify power plug (i.e. UK, Continental or U.S.)

The BAVM is an all solid state on-channel audio/video modulator that provides a modulated video and audio RF carrier output on any single VHF channel in the frequency range of 47 to 300 MHz. The Modulator can be used to put audio and video on any unused channel. The modulator's optimum vestigial sideband selectivity allows its use in adjacent channel systems.

The Modulator accepts standard polarity (sync negative) of 0.7-2.5Vp-p level from video sources such as a satellite receiver, TV camera, video tape recorder or TV demodulator. All level controls are located on the front panel for ease of operation.



SPECIFICATIONS

RF

Frequency Range: 47 to 300 MHz
Output Level: +115 dBμV
Output Level Range: 10 dB, continuously adjustable by the front panel output level control
Audio/Video Carrier Ratio Control: -10 dB to -20 dB, continuously adjustable by the front panel output level control
Video Carrier Frequency Tolerance: ±10 KHz
Audio Carrier Frequency Setting: Relative to visual carrier ± 1.5 KHz
Spurious Output (except for video sidebands) at +115 dBuV: 55 dB down Min. (A/V carrier ratio = -15 dB)
Output Return Loss: 12 dB

VIDEO

Video Input for 87.5% Depth of Modulation: 0.7V p-p
Vestigial Sideband Response: Optimized for adjacent channel operation
Video Input Return Loss: 18 dB
Video Carrier to Noise Ratio: 60 dB
P-P Video to RMS Hum Ratio: 60 dB
Differential Gain @ 87.5% Modulation: ±0.25 dB
Differential Phase @ 87.5% Modulation: ±2°

AUDIO

Input Impedance: 10K ohms, unbalanced
Input Audio for 50 KHz Peak Deviation: 280 mV RMS
Audio Frequency Response 50 Hz to 15 KHz: ±1 dB Ref. to Std. 50μsec pre-emphasis
Intercarrier Stability: ±5.0 KHz, 0°C to 50°C

GENERAL

Power Requirements: 207-253 VAC, 50 Hz
Fuse: 1/8A Slo-Blo
Temperature Range: 0°C to 50°C

MECHANICAL

Dimensions: 48cm x 4.5cm x 12cm
Shipping Weight: 2 kg
Connectors
Audio In: RCA phono
Video In: "F" Type, female
RF Out: "F" Type, female

The MAVM-s is a heterodyne SAW filter audio/ video modulator that provides a modulated video and audio RF carrier output on any single channel in the frequency range of 5 to 550 MHz. The Modulator can be used to put audio and video on any unused channel of a TV system. The heterodyne conversion system is designed for proper vestigial sideband selectivity for adjacent channel color systems with the use of a SAW filter.

I.F. loop-thru capability in the MAVM-s supplies a padded I.F. output before channel conversion. This feature provides the capability to replace standard internally generated I.F. output with an alternate source of composite I.F., or allows insertion of I.F. scrambling equipment.

The MAVM-s has a field replaceable heterodyne converter board which permits qualified service personnel to change channels in the field.

The Modulator accepts standard polarity of 0.7-2.5 Vp-p level from video sources such as a satellite receiver, TV camera, video tape recorder or TV demodulator. All level controls and modulation indicators are located on the front panel for ease of operation.

SPECIFICATIONS

RF

Frequency Range: Any TV Channel in the 5 to 550 MHz range
Output Level: +105 dBµV Typical; +102 dBµV Minimum
Output Level Range: 15 dB, continuously adjustable by the front panel output level control
Audio/Video Carrier Ratio Control: -9 dB to -30 dB, continuously adjustable by the front panel output level control
Video Carrier Frequency Tolerance: ±10 KHz
Audio Carrier Frequency Setting: Relative to video carrier ±1.0 KHz
Spurious Output (except for video sidebands) at +102 dBuV: 63 dB down (A/V carrier ratio = 15 dB)
Output Return Loss: 15 dB

IF

Output Level: Set at +88 dBµV
Output Return Loss: 16 dB
Input Level Range (beat >60 dB down): +85 dBµV Min. to +90 dBµV. A/V carrier ratio -15 dB, color subcarrier @ -17 dB
Input Return Loss: 15 dB
Intermod Distortion (3 tone intermod): -60 dB; +102 dBµV output, A/V carrier ratio -15 dB, color subcarrier @ -17 dB

VIDEO

Video Input for 87.5% depth of modulation: 0.7 p-p
Video Modulation Depth Indicator: Set @ 87.5% adj. to 96%
Video Input Return Loss: 20 dB
Video Carrier to Noise Ratio: 60 dB
P-P Video to RMS Hum Ratio: 60 dB
Differential Gain @ 87.5% Modulation: 3%
Differential Phase @ 87.5% Modulation: ±1°
Group Delay: ±40 nsec

AUDIO

Input Impedance: 10K Ohms, unbalanced
Input Audio for 50 KHz Peak Deviation: 140mV RMS
Audio Overmodulation LED Indicator: 50 KHz ±2 KHz
Audio Frequency Response 20 Hz to 20 KHz: ±1 dB Ref. to Std. 50µ sec pre-emphasis (exceeds 100 KHz with pre-emphasis defeated)
Intercarrier Stability: ±2.5 KHz, 0°C to 50°C

GENERAL

Power Requirements: 207-253 VAC, 50 Hz
Fuse: 0.08A, Slo Blo
Temperature Range: 0°C to 50°C

MECHANICAL

Dimensions: 48cm x 4.5cm x 14cm
Shipping Weight: 3 kg
Connectors
Audio In: RCA phono
Video In: "F" Type
RF Out: "F" Type
I.F. In and Out: "F" Type

OPTION

FM Modulator: The MAVM-s can be provided, on special order, as an FM Modulator with no video carrier and increased deviation.

SAW FILTERED MODULATOR

Stock No.
PAL I: J5992(*)(**)
PAL B/G: B5992(*)(**)
PAL D/K: D5992(*)(**)

- I.F. Loop Thru Allows Replacement of Standard I.F. Output with Alternate Source of Composite I.F. or Allows Insertion of I.F. Scrambling Equipment and All-Call Alert Systems
- Field Replaceable Heterodyne Converter Board for Easy In-Field Channel Conversion
- Calibrated Video and Audio LED Indicators
- SAW Filter Provides Flat Group Delay and Maintenance-Free Bandpass with Optimum Vestigial Sideband Characteristics

(*) Specify video carrier frequency or channel

(**) Specify power plug (i.e. UK, Continental or U.S.)

MAVM-s Channel Conversion

MASTERLINE® OUTPUT CONVERTER MODULE
Stock No. 5974

Replaceable module allows changing of channels in the field quickly and easily. No desoldering, soldering or special tools are required. Specify channel and TV system when ordering.

ESHM-C CATV Modulator
Now available to 550 MHz

CATV MODULATOR
Stock No.

PAL I: J5928(*)(**)
PAL B/G: B5928(*)(**)
PAL D/K: D5928(*)(**)

- Separate Audio and Video +100 dBμV IF Loops
- SAW Filter Provides Flat Group Delay and Maintenance-Free Bandpass Characteristics for Proper Vestigial Sideband Shaping
- Selectivity for use in Adjacent Channel Systems
- Removable Converter Module for Easy, In-Field Channel Change, Without Opening Modulator Housing
- Three Light Indicator System Shows Proper Video Modulation and Over or Under Modulation
- Audio/Video IF Loop-Thru Allows IF Scrambling or Alternate Source of Composite IF
- Wide Range of Available Frequencies—Any Channel in the 5 to 550 MHz range

The ESHM-C is an all solid-state heterodyne audio/video modulator. It generates modulated video and audio RF carrier output on any single channel in the frequency range of 5 to 550 MHz. It requires only standard baseband video and audio inputs. The ESHM-C also features excellent modulation qualities for use with character generators. The modulator uses a SAW (Surface Acoustic Wave) filter which provides flat group delay, maintenance - free bandpass and optimum vestigial sideband characteristics.

A combined IF loop-thru accommodates the use of an alternate source of combined IF, as well as IF scrambling equipment. Separate audio and video IF loop-thrus are provided in the ESHM-C in order to use alternate scrambling systems. The modulator accepts standard PAL signals (0.5-2.5Vp-p) from video sources such as a satellite receiver, video tape recorder, TV demodulator, or TV camera. All level controls and modulation indicators are located on the front panel for ease of operation.

The ESHM-C has a removable heterodyne module, (slide-out drawer), which permits qualified service personnel to easily change channels in the field, without removing the entire modulator from the headend rack.

A three-light indicator system pinpoints correct video modulation as well as under or overmodulation. An audio overmodulation indicator is also provided.

MAINFRAME
Stock No. 5939(**)

ESHM-C Mainframe only, without channel Converter Drawer. Available for special applications when just an IF output signal is required. Put your spare Converter Drawers to use in one of these as an alternative to purchasing a complete modulator.

CONVERTER DRAWER
Stock No.

PAL I: J5938(*)
PAL B/G: B5938(*)
PAL D/K: D5938(*)

Slide-out drawer allows changing of channels in the field quickly and easily without removing the entire modulator from a headend rack or opening the modulator housing. Specify channel when ordering.

Contact your Blonder Tongue supplier for details on our Converter Drawer Return and Replacement Policy.

(*) Specify video carrier frequency or channel
(**) Specify power plug
(i.e. UK, Continental or U.S.)

SPECIFICATIONS

RF
Available Channels: Any TV Channel in the 5 to 550 MHz range
Video Carrier Output: +123 dBμV Typical; +120 dBμV Minimum, continuously adjustable between +110 and +120 dBμV by a front level control
Audio to Video Carrier Ratio: -10 dB to -20 dB continuously adjustable by a front panel audio/video ratio control
Video Carrier Frequency Tolerance: ±5 KHz
Audio Carrier Frequency: Relative to video carrier ±250 Hz
Spurious Outputs: -65 dB down at +120 dBμV output (Audio carrier -15 dB, color sub-carrier -25 dB)
Output Return Loss On-Channel: 12 dB

IF
Return Loss IF Loop Thru: 16 dB
Composite IF
Output: Video 92.5 dBμV (+2.5/-0 dB); Audio (front panel adj.) 10-20 dB below video.
Input: Video (max) 95 dBμV
Separate Audio and Video IF Loop-Thrus:
Output: Video +100 dBμV (±2.5 dB); Audio +90 dBμV (±2.5 dB)
Input: Video +94 dBμV (+2.5/-5.0 dB); Audio +84 dBμV (+2.5/-5.0 dB)

VIDEO
Video Input for 87.5% Depth of Modulation: 0.5V P-P Min. Composite video
Video Input Return Loss: 24 dB @ 75 ohms
Video Modulation Depth: 0 to 95% variable by the front panel video level control (internal white limit factory set to 95%)
AM Hum and Noise: 60 dB below 87.5% modulation depth
Sync Compression: 0,5 dB Max. @ 87.5% modulation depth
Tilt or Sag: 1% Max. on 60 Hz square wave
Differential Gain: ±0.5 dB Max. @ 87.5% modulation
Differential Phase: ±1.5° Max. @ 87.5% modulation
Group Delay: ±50ns Max. (Video -0.5 MHz to aural)
Video Overmodulation Indicators: Red LED for >87.5% modulation, Green LED for 80-87.5% modulation, Yellow LED for <80% modulation

AUDIO
Audio Input Level for 50 KHz Peak Deviation: 250 mV/rms, Min.
Audio Input: 33K ohms (balanced or unbalanced)
Audio Distortion at 50 KHz Peak Deviation: less than 0.5% (20 Hz-20 KHz)
Audio Frequency Response: 20 Hz to 20 KHz ±1 dB with 50μs pre-emphasis
Intercarrier Stability: ±250 Hz (Max.)
Audio Hum and Noise Below 50 KHz Peak Deviation: 60 dB
Audio Overmodulation Indicator: Red LED for greater than 50 KHz peak deviation

GENERAL
Power Input: 207-253 VAC, 50 Hz, 30W
Temperature Range: 0°C to 50°C

MECHANICAL
Dimensions: 48 cm x 4.5 cm x 40 cm, Rack Mount
Shipping Weight: 3.9 Kg.

CONNECTORS
RF in & out: "F" Type
Video IF in & out: "F" Type
Audio IF in & out: "F" Type
Video Input: "F" Type
Audio Input: Balanced Terminal Block
Composite IF in & out: "F" Type

The SAVM-60b is an all solid state heterodyne audio/video modulator that provides a modulated video and audio RF carrier output on any single VHF channel in the frequency range of 5 to 550 MHz. Optimum bandpass characteristics and flat group delay result from the use of a SAW VSB filter and heterodyne conversion. A full +120 dBµV output capability insures compatibility with any existing headend.

IF loop-thru capability in the SAVM-60b supplies a padded IF output before channel conversion. This feature provides the capability to replace standard internally generated IF output with an alternate source of composite IF, or allows insertion of IF scrambling equipment.

The SAVM-60b has a field replaceable heterodyne converter board which permits qualified service personnel to change channels in the field.

The Modulator accepts an input of 0.7-2.5Vp-p level from video sources such as a TV camera, video tape recorder, TV demodulator, or satellite receiver. All level controls and modulation indicators are located on the front panel for ease of operation.

SPECIFICATIONS

RF

Frequency Range: 5 to 550 MHz (any channel)
Output Level: +123 dBµV, Typical. 120 dBµV Min.
Output Level Range: 15 dB, continuously adjustable by the front panel output level control
Audio/Video Carrier Ratio Control : -9 dB to -30 dB, continuously adjustable by the front panel output level control
Video Carrier Frequency Tolerance: ±10 KHz
Audio Carrier Frequency Setting: Relative to video carrier, ±1.0 KHz
Spurious Output (except for video sidebands) at +120 dBuV Output: 60 dB down, A/V carrier ratio -15 dB
Output Return Loss: 15 dB

IF

Output Level: Set at 88 dBµV
Output Return Loss: 16 dB
Input Level Range (Beat >60 dB down): 85 dBµV Min. to 90 dBµV, A/V carrier ratio -15 dB, color subcarrier -17 dB
Input Return Loss: 15 dB
Intermod Distortion (3 tone intermod): -60 dB; 120 dBµV output, A/V carrier ratio -15 dB, color subcarrier @-17 dB

VIDEO

Video Input for 87.5% depth of modulation: 0.7 p-p
Video Modulation Depth Indicator: Set @ 87.5%
Video Input Return Loss: 20 dB
Video Carrier-to-Noise Ratio: 60 dB
P-P Video to RMS Hum Ratio: 60 dB
Differential Gain @ 87.5% Modulation: 0.2 dB
Differential Phase @ 87.5% Modulation: 1°
Group Delay: ±40 nsec

AUDIO

Input Impedance: 10K Ohms, unbalanced
Input Audio for 50 KHz Peak Deviation: 140 mV RMS
Audio Overmodulation LED Indicator: 50 KHz, ±2 KHz
Audio Frequency Response 20 Hz to 20 KHz: ±1 dB Ref. to Std. 50 uSec. pre-emphasis (exceeds 100 KHz with pre-emphasis defeated)
Intercarrier Stability: ±2.5 KHz, 0° C to 50°C
External Audio Carrier
Input Level: +95 to +105 dBµV
Impedance: 75 ohms

GENERAL

Power Requirements: 207-253 VAC, 50Hz, 0.08 A Slo Blo Fuse
Temperature Range: 0° C to 50°C

MECHANICAL

Dimensions: 48cm x 4.5cm x 22cm
Shipping Weight: 3kg
Connectors
Audio In: RCA phono
Audio Carrier In: "F" Type
Video In: "F" Type
RF Out: "F" Type
IF In and Out: "F" Type

SAVM-60b SAW FILTER MODULATOR Stock No.

PAL I: J5994(*)(**)
PAL B/G: B5994(*)(**)
PAL D/K: D5994(*)(**)

- Full +120 dBµV Output with Low Distortion for Compatibility with CATV Headend Systems
- Accepts a Modulated Carrier Audio Input or Baseband Audio
- Heterodyne Conversion Process and SAW Filter Insures Proper Vestigial Sideband Selectivity for Adjacent Channel Color Systems
- IF Loop-Thru Allows Replacement of Standard IF Output with Alternate Source of Composite IF or Allows Use of All-Call Alert System
- Field Replaceable Heterodyne Converter Board for Easy In-Field Channel Conversion
- SAW Filter Provides Flat Group Delay and Maintenance Free Bandpass Characteristics
- Calibrated Video and Audio LED Indicators
- Video and Audio Level Controls

SAVM-60b CHANNEL CONVERSION MASTERLINE OUTPUT CONVERTER MODULE Stock No. 5974

Replaceable module allows changing of channels in the field quickly and easily. Specify channel when ordering.

(*) Specify video carrier frequency or channel

(**) Specify power plug (i.e. UK, Continental or U.S.)

SAVP Processor

Now with Increased Input and Output Frequency Coverage

SAW FILTERED AUDIO/VIDEO PROCESSOR
Stock No.

PAL I:	**J5983(*)(**)**
	VJ5983(*)(**)
	UJ5983(*)(**)
PAL B/G:	**B5983(*)(**)**
	VB5983(*)(**)
	UB5983(*)(**)
PAL D/K:	**D5983(*)(**)**
	VD5983(*)(**)
	UD5983(*)(**)

- Dual Heterodyne Conversion Process with Two SAW Filters Assures Excellent Adjacent Channel Selectivity
- I.F. Loop-Thru
- SAW Filters Provide Flat Group Delay
- Field Replaceable Heterodyne Converter Boards Permit Easy "On or Off" Channel Changes
- Front Panel Audio and Combined A/V Output Level Controls
- Front Panel Low Input Monitor Indicates Insufficient Input Signal
- Designed for Mounting in Standard EIA Rack

(*) Specify input and output video carrier frequencies or channels

(**) Specify power plug (i.e. UK, Continental or U.S.)

The Blonder Tongue SAVP is a SAW filtered audio/video processor. This heterodyne processor is used to put off-air broadcast channels or CATV channels onto a TV system. Standard SAVP output channels are any channel in the 47 to 550 MHz range.

Customer must specify input channel video carrier frequency assignment when placing order.

A high degree of adjacent channel rejection (70 dB typical) is achieved with a dual SAW filter configuration. The first SAW filter, located in the RF Input Converter module protects against intermodulation interference from strong adjacent channels. The second SAW filter placed in the IF processing module provides additional adjacent channel rejection.

The SAVP features a low (6 dB) noise figure. An IF dual-detection, true peak response AGC circuit, delayed at the input stage, maintains low noise figure when weak input signal levels are present.

The processor has composite IF loop-thru capability which supplies a spurious-free output before channel conversion. The external IF loop-thru provides the capability to substitute the internally generated IF with an alternate standby source. It also permits the insertion of scrambling equipment for highly secure premium programming.

Field replaceable heterodyne converter boards permit qualified service personnel to change input and/or output channels of the SAVP quickly and simply. Both "On" and "Off" channel changes can be readily made.

An LED low input signal indicator, an audio level adjustment, and a combined A/V output level control are provided on the front panel for easy adjustment of the unit.

SPECIFICATIONS

RF

Frequency Range: Input: 47 to 862 MHz.
Output: 47 to 550 MHz

Three processor configurations are available:

#5983 On-Channel VHF
(for Direct Off-Air applications = Frequency Locked)

#V5983 Off-Channel VHF
(for VHF to VHF Conversions)

#U5983 Off-Channel UHF
(for UHF to VHF Conversions)

Output Level (Max.): +105 dBμV
Spurious Output @ +102 dBuV: 64 dB down
Output Level Range: 15 dB
Sound Trap Adjustment Range: 0-11 dB
Video Carrier Frequency Tolerance
ON Channel: Same as input channel source
OFF Channel: 5 KHz
RF Input Level: +45 dBμV to +95 dBμV
Noise Figure: 6 dB VHF; 8 dB UHF
Input Return Loss: 14 dB
Image Rejection: 70 dB VHF; 60 dB UHF
Output Return Loss: 16 dB
AGC Stiffness: ±0.5 dB for a +50 to +90 dBμV input change
AGC Indicator Range
LED ON: -1.5 dB below AGC threshold
LED OFF: +1.5 dB above AGC threshold
Intermod Distortion (3 tone intermod): -60 dB; Pix at +102 dBμV, audio-15 dB, C/V-17 dB
Bandpass Flatness: 1.5 dB P/V
Group Delay: <100 n sec.
Selectivity
fa +1.5 MHz & above: -60 dB Min.
fv -1.5 MHz & below: -60 dB Min.
Hum Modulation: -60 dB Min.

IF

Output Level: Factory set @ +88 dBμV
Output Return Loss: 18 dB
Input Level Range (Beat >60 dB down @ +102 dBuV output): +85 dBμV Min. to +90 dBμV Max.
Input Return Loss: 15 dB

GENERAL

Temperature Range: 0°C to 50°C
Power Requirements: 207-253 VAC, 50 Hz, 0.16 A Slo Blo Fuse

MECHANICAL

Dimensions: 48cm x 4.5cm x 24cm
Shipping Weight: 3.6kg
Connections
RF In & Out: "F" Type, female
I.F. In & Out: "F" Type,female
Cable Assembly (External I.F. Loop): 23cm RG-59 "F" to "F", Supplied

SAVP CHANNEL CONVERSION

Both input and output converter modules can be replaced in the field. Consult factory for exact ordering information.

ESHP CATV Processor
Now available to 550 MHz

The Blonder Tongue ESHP is a high output (+120 dBμV) SAW filtered audio/video processor. This heterodyne processor is used to put off-air broadcast channels onto TV systems. ESHP output channels are available for the frequency range of 47 to 550 MHz.

The ESHP features a low (6 dB typical) noise figure. An IF dual-detection, true peak response AGC circuit, delayed at the input stage, maintains a low noise figure when weak input signal levels are present.

The processor has composite IF loop-thru capability which supplies a spurious-free output before channel conversion. The external IF loop-thru provides the capability to substitute the internally generated IF with an alternate standby source. It also permits the insertion of scrambling equipment for highly secure premium programming.

The ESHP has an optional automatic standby feature (Option A) which is activated when the input signal drops to an unusable level. A rear panel switch enables the operator to select either the internal standby carrier or an external substitute composite IF source for a replacement signal.

Field replaceable heterodyne converter boards permit qualified service personnel to change input and/or output channels of the ESHP quickly and simply. Both "On" and "Off" channel changes can be readily made.

An LED low input signal indicator, an audio level adjustment, and a combined A/V output level control are provided on the front panel for easy adjustment of the unit.

SPECIFICATIONS

RF

Frequency Range: Any input channel in the frequency range of 47 to 862 MHz.
Output Channels-Any in the frequency range of 47 to 550 MHz.
Three processor configurations are available:
#5984 On-Channel VHF
(for Direct Off-Air applications = Frequency Locked)
#V5984 Off-Channel VHF
(for VHF to VHF Conversions)
#U 5984 Off-Channel UHF
(for UHF to VHF Conversions)
Output Level (Max.): +125 dBμV; +120 dBμV Min.
Spurious Output @ +120 dBuV: -64 dBc
Output Level Range: 15 dB
Sound Trap Adjustment Range: 0-11 dB
Video Carrier Frequency Tolerance
ON Channel: Same as input channel;
OFF Channel: 5 KHz
RF Input Level: +45 dBμV to +95 dBμV
Noise Figure: 6 dB VHF; 8 dB UHF
Input Return Loss: 14 dB
Image Rejection: 70 dB VHF; 60 dB UHF
Output Return Loss: 16 dB
AGC Stiffness: ±0.5 dB for a +60 to +90 dBμV input change
AGC Indicator Range
LED ON: -1.5 dB below AGC threshold
LED OFF: +1.5 dB above AGC threshold
Intermod Distortion (3 tone intermod): -60 dB; Pix at +120 dBμV, A/V-15 dB, C/V-17 dB
Bandpass Flatness: 1.5 dB P/V
Group Delay: <100 n sec.
Selectivity
fA +1.5 MHz & above: -60 dB Min.
fv -1.5 MHz & below: -60 dB Min.
Hum Modulation: -60 dB Min.

IF

Output Level: Factory set @ +88 dBμV
Output Return Loss: 18 dB
Input Level Range (Beat >60 dB down @ +120 dBuV output): 85 dBμV Min. to +90 dBμV Max.
Input Return Loss: 15 dB

GENERAL

Temperature Range: 0°C to 50°C
Power Requirements: 207-253 VAC, 50 Hz, 0.16 A Slo Blo Fuse

MECHANICAL

Dimensions: 48cm x 4.5cm x 38cm
Shipping Weight: 5kg
Connectors
RF In & Out: "F" Type
I.F. In & Out: "F" Type
Cable Assembly: 23cm RG-59 "F" to "F", Supplied (External I.F. Loop)

OPTIONS

Option A: External IF feature. Accepts an IF input which is substituted when normal input is lost.
External IF Input Level: 85-90 dBμV for beat at -60 dBc; Sound =-15 dB; Color =-17dB

HIGH OUTPUT SAW FILTERED AUDIO/VIDEO PROCESSOR

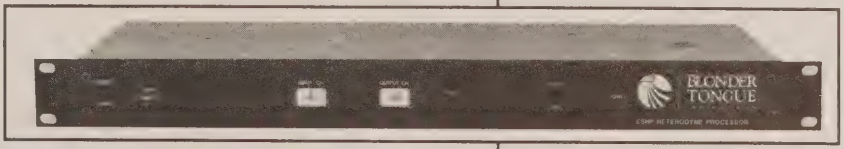
Stock No.

PAL I:	**J5984(*)(**)**
	VJ5984(*)(**)
	UJ5984(*)(**)
PAL B/G:	**B5984(*)(**)**
	VB5984(*)(**)
	UB5984(*)(**)
PAL D/K:	**D5984(*)(**)**
	VD5984(*)(**)
	UD5984(*)(**)

- Dual Heterodyne Conversion Process with Two SAW Filters Assures Excellent Adjacent Channel Selectivity
- Full +120 dBμV Output
- Optional IF Switching
- Utilizes Push-Pull Hybrid Output.
- Generates Standby Carrier Upon Loss of Input
- SAW Filters Provide Flat Group Delay
- Field Replaceable Heterodyne Converter Boards Permit Easy "On or Off" Channel Changes
- Front Panel Audio and Combined A/V Output Level Controls
- Low Input Monitor Indicates Insufficient Input Signal

(*) Specify both input and output video carrier frequencies or channels

(**) Specify power plug (i.e. UK, Continental or U.S.)



ESHP CHANNEL CONVERSION

Both input and output converter modules can be quickly and easily replaced in the field. Consult factory for exact ordering information.

AD-1
AGILE DEMODULATOR
Stock No.

PAL I: J5915(*)
PAL B/G: B5915(*)
PAL D/K: D5915(*)

- Agile Input
- Direct DIP Switch Channel Selection - No Memory to Program, Non-volatile
- Synthesized Tuning - Assures Precise Channel Location
- Nyquist SAW Filter for Accurate Sideband Response
- Keyed AGC to Give Stable Picture Under Varying Input Signal Conditions
- Synchronous Video Detector for Superior Linearity
- Quadrature Audio Detector Keeps Distortion Low
- Low Profile 4.5cm High Chassis

(*) Specify power plug
(i.e. UK, Continental or U.S.)

The Blonder Tongue AD-1 is an agile audio/video demodulator. Front panel switches permit non-volatile RF tuning of any TV channel. It includes Broadcast UHF/VHF and CATV channels from 47 to 862 MHz. The AD-1 demodulates any TV channel to baseband video and audio signals for monitoring or remodulation.

The AD-1 incorporates a PLL synthesized LO to assure precise tuning. A Nyquist SAW filter provides stable, accurate demodulation of the VSB signal. This preserves timing and minimizes distortion. Keyed AGC circuitry compensates for signal fluctuations. A synchronous video detector provides low differential gain and minimal phase distortion. This reduces video ringing and color smear.

The AD-1 requires only 4.5cm of height in a standard rack and has no special cooling requirements.

The AD-1 satisfies applications in CATV headends, TV broadcast studios, microwave hubs, translator sites, educational television systems, CCTV surveillance, and industrial video networks.

SPECIFICATIONS

RF

Input Frequency Range: 47 to 862 MHz
TV Bands Covered: VHF Low, VHF High, Mid, Super, Hyper, and UHF Incl. Offset Assignments, (Sub-Band Optional)
Tuning Increment: 250 KHz
Input Level: +80 dBµV max, single channel
Noise Figure
VHF: 7 dB
UHF: 9 dB
Image Rejection
VHF: 65 dB
UHF: 60 dB

VIDEO

Output Level (@ 75 ohms): 1 V P-P
Differential Gain: 5%
Differential Phase: 3°
Frequency Response: ±1 dB to 5 MHz

AUDIO

Output Level (@ 600 Ohms Unbal): 500 mV RMS
Harmonic Distortion: 1% max
Frequency Response: ±1 dB, 50 Hz to 15 KHz

GENERAL

Power Requirements: 207 to 253 VAC, 50 Hz, 16W
Fuse (Rear Panel): 0.16 A, Slo-Blo
Temperature Range: 0° to 50 ° C

MECHANICAL

Dimensions: 48cm x 4.5cm x 18cm
Shipping Weight: 2kg

Channel Selection: 16 position DIP switch

INDICATORS

Power-On: Green LED

CONNECTORS (REAR PANEL)

RF Input: "F" Type
Video Output: "F" Type
Audio Output: RCA phono

OPTIONS

OPTION 1

Sub-Band Converter: Has an input frequency range of 5.75 to 39.75 MHz for sub-channels. Output frequency range is 174 MHz to 220 MHz. Acceptable input level is +66 dBµV to +80 dBµV.

OPTION 2

Digital Control, Parallel Input: Accepts a parallel data input to tune the input frequency.

OPTION 3

Digital Control, Series RS 232 TTL Input Loop: Accepts serial, asynchronous ASCII data to change tuned frequencies.

OPTION 4

Automatic Mute: Deactivates audio demodulation function if no sync is present on incoming signal.

The MCA-b channel processor is a 3 volt VHF TV strip amplifier with automatic gain control and all solid-state circuitry. It is intended to amplify and stabilize the level of a single VHF channel in headend systems. The combination of a low-noise, high-gain amplifier with an exceptional output capability and wide AGC window assures a large dynamic range providing a stable, quality signal free of distortion and intermodulation products. An adjustable sound trap at the input, and an adjacent channel intermodulation trap at the output allow adjacent channel operation at high levels without an external sound trap or additional output filtering.

Each MCA-b consists of three modular sections: A channelized input amplifier, a main amplifier and a channelized output module consisting of a directional filter diplexer to enable backmatched mixing of alternate channels in a system. All three modules can be easily removed for servicing and/or channel changing. Moreover, a single amplifier board covers the entire band thereby simplifying the stocking of spares.

All MCA-b amplifiers are designed for rack or cabinet mounting.

SPECIFICATIONS

ELECTRICAL

Frequency Range: Any TV channel in the frequency range of 47 to 300 MHz
Maximum Output for 1/2 dB Sync Compression: +131 dBμV (3.5 volts)
Recommended Output Level for Color Operation: 128 dBμV (2.5V) for 3 tone intermod beat down 60dB
Recommended Output Level for Adjacent Channel Operation: +126 dBμV (2.0V) for adjacent channel beat down 48 dB min. 58 dB typical
Gain: 55.0 dB min.; 61.0 dB typical; FM: 54 dB
Noise Figure at Full Gain: 7.0 dB; FM: 7.5 dB
Output Level Control Range: 19 dB min. FM: 107.5 to 130.5 dBμV
AGC Range: 40 dB min.
AGC Stiffness (output change for 40 dB input change): <0.5 dB at 128 dBμV output; <1.0 dB at 119 dBμV output; FM <1.5 dB at 115 dBμV output
Maximum Input with Level set at 129 dBuV Output: 103 dBμV
Bandpass Flatness, over 40 dB Gain Control Range: ±1.5 dB max; ±0.75 dB typical; FM: ±1.0 dB (91-108 MHz)
Alternate Channel Rejection : -30 dB (±11 MHz from channel center)
Input Match: 14 dB; FM: 10 dB
Output Match: 18 dB >12 MHz from channel center; 18 dB on channel; FM on channel 10 dB (91-108 MHz), off channel 14 dB
Maximum Output Level for 3rd Order Beats at -40 dB; FM only 120 dBμV
Trap Depth: FM only 10 dB

GENERAL

Power Requirements: 207-253 VAC, 50 Hz, 0.06 A
Fuse: 1/8 amp, Slo-Blo
Test and Monitor Points:
External: Output, -30 dB
Internal: AGC, 9.5V

MECHANICAL

Dimensions: 48cm x 4.5cm x 10cm
Shipping Weight: 2kg.
Connections:
RF Input: "F" Type, female
Thru Input and Output: "F" Type, female
RF Test: "G/F" Type, female

MCA-b
3 VOLT
VHF AMPLIFIER
Stock No.
PAL I: J4454(*)(**)
PAL B: B4454(*)(**)
PAL D: D4454(*)(**)

- Wide Dynamic Range
- True Peak Detector AGC
- Low Noise Figure
- Adjustable Aural Carrier
- Lightning and Surge Protected

(*) Specify video carrier frequency, channel or FM

(**) Specify power plug (i.e. UK, Continental or U.S.)

High Output Strip Amplifier - (UHF) Channel Converter

MCA-Ub
UHF STRIP AMPLIFIER
Stock No.

PAL I: J4709 (*)(**)
PAL G: B4709(*)(**)
PAL K: D4709(*)(**)

- FET Input Stage
- 30 dB AGC Range
- Minimum Interaction with Other Channels
- High Output, Low Noise

(*) Specify video carrier frequency or channel

(**) Specify power plug
(i.e. UK, Continental or U.S.)

MCA-Ub

The MCA-Ub channel processor is a high-output UHF-TV strip amplifier with automatic gain control and all solid-state circuitry. It is intended to amplify and stabilize the level of a single UHF channel in headend systems.

The combination of a low-noise, high-gain amplifier with an exceptional output capability and wide AGC window assures a large dynamic range providing a stable quality signal free from distortion and intermodulation products.

Each MCA-Ub has a channelized output module consisting of a directional filter diplexer to enable backmatched mixing of multiple channels in a system.

SPECIFICATIONS

ELECTRICAL

Frequency Range: 470 to 862 MHz
Maximum Output Level for 1/2 dB Sync Compression: 129 dBμV to 800 MHz; 128 dBμV above
Recommended Output Level for Color Operation (Beat at -50 dB): 127 dBμV to 800 MHz; 126 dBμV above
Gain: 58 dB to 800 MHz; 54 dB above
Noise Figure at Full Gain: 7.5 dB to 800 MHz; 9.5 dB above
Level Set Range: 109 to 130 dBμV
AGC Range: 30 dB
AGC Stiffness: 0.4 dB output change for a 30 dB input change @ +124 dBμV output
Bandpass Flatness, over 30 dB AGC Range: 1.0 dB
Selectivity, ±35 MHz from Channel Center: 40 dB to 800 MHz; 25 dB above
Input and Output Impedance: 75 ohms
Input Match on Channel over full 30 dB AGC Range: 13 dB
Return Loss
Output Match on Channel: 10 dB
Output Match Off Channel, ≥35 MHz from Channel Center: 16 dB

GENERAL

Power Requirements: 207 to 253 VAC, 50 Hz, 0.06 A
Fuse: 1/8 amp., Slo-Blo
Monitor Point, Output: -30 dB ± 1.0 dB
Front Panel Controls: Output level and AGC tuning

MECHANICAL

Dimensions: 48cm x 4.5cm x 15cm
Shipping Weight: 3.2kg
Connectors
RF Input: "F" Type, female
Thru Input and Output: "F" Type, female
RF Test: "G/F" Type, female

MCX-Ub
UHF TO VHF SINGLE CHANNEL CONVERTER
Stock No.

PAL I: J1449(*)
PAL B/G: B1449(*)
PAL D/K: D1449(*)

- Designed for Adjacent Channel Operation
- High Input Capability with Low Noise Figure for Wide Dynamic Range
- Balanced Mixer for Maximum Isolation Between Local Oscillator, Input and Output
- Excellent Image Rejection

(*) Specify the input and output video carrier frequenices or channels and check with the factory for forbidden conversions

MCX-Ub

The Blonder-Tongue MCX-Ub is a single channel converter designed for use in high quality headends. The MCX-Ub has a crystal controlled frequency synthesizer, allowing the unit to be used in adjacent channel headends. It is electrically and mechanically compatible with the MCA-b type Channel Processor and BPF-a Bandpass Filter.

This converter features single conversion circuitry for channel changes without double conversion or external traps and filters. In the instances where a conversion is forbidden and double conversion becomes necessary, choose a BT Heterodyne Processor.

The balanced mixer and highly stable oscillator allow operation in an adjacent channel headend.

CONVERSIONS AVAILABLE

The MCX-Ub will convert any UHF channel in the 470 to 862 MHz range to any channel in the 5 to 300 MHz range except for some forbidden conversions.

SPECIFICATIONS

ELECTRICAL

Conversion Gain: 14 dB (10dB for conversions within 24 MHz of each other)
Noise Figure: 6.2 dB
Minimum Input Signal for Taso Grade 1 (Excellent) (S/N 46 dB) Picture: +55.5 dBμV
Input Capability: 1/2 dB sync compression: +100 dBμV; 2 tone, 3rd order intercept point: +106 dBμV
Recommended Input for On-Channel Intermods -55 dB: +85 dBμV
Selectivity (±11 MHz): -20 dB
Input Return Loss: 16 dB
Flatness: 0.8 dB
Image Rejection: -55 dB min.
L.O. Related Spurious Outputs: L.O. level: +22 dBμV @ output; +30 dBμV @ input
Frequency Stability: ±25 KHz
Hum Modulation: -58 dB

GENERAL

Operating Temperature: -20°C to +50°C
Power Requirements: 207 to 253 VAC, 50 Hz, 0.05 A
Fuse: 1/8 A

MECHANICAL

Dimensions: 48cm x 4.5cm x 11cm
Shipping Weight: 2.3kg
Connectors
Input and Output: "F" Type, female

OC-8c

The Blonder Tongue OC-8c is a 600 MHz passive output combiner with eight broadband input ports. It is used in headends to combine up to eight modulators and/or processors. It is manufactured with radiation-proof passives.

The OC-8c features high isolation between ports and a low net combining loss from each of the eight inputs and the output. A -20 dB test jack, on the front panel, permits testing without removing the unit from the headend. Headend output levels may be conveniently adjusted without disconnecting any equipment.

SPECIFICATIONS

ELECTRICAL

Frequency Range: 5 to 600 MHz
Insertion Loss
Individual: 12 dB
Return Loss
Input: 18 dB
Output: 15 dB
Isolation: 24 dB, paired ports; 32 dB, unpaired ports
Slope: 1.5 dB
Flatness: ±0.2 dB (relative to the slope)
Impedance: 75 ohm
Test Jack: -20 dB

MECHANICAL

Dimensions: 48cm x 4.5cm x 39cm
Shipping Weight: 3kg
Signal Connections ("F" type)
Input: 8
Output: 1
Test: 1 (Front Panel)

OC-8c
PASSIVE HEADEND
COMBINER
Stock No. 5957

OC-12c

The Blonder Tongue OC-12c is a 600 MHz passive output combiner with twelve broadband input ports. It is used in headends to combine up to twelve modulators and/or processors. It is manufactured with radiation-proof passives.

The OC-12c features high isolation between ports and a low net combining loss from each of the twelve inputs. Headend output levels may be conveniently adjusted without disconnecting any equipment.Two or more units may be used to provide more than twelve channels in larger systems (i.e. 36, 48 and 60).

SPECIFICATIONS

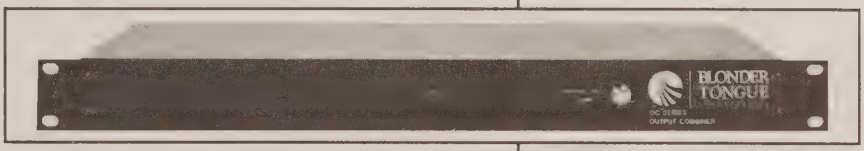
ELECTRICAL

Frequency Range: 5 to 600 MHz
Insertion Loss Individual: 16 dB
Return Loss, Input: 14 dB
Output: 12 dB
Isolation: 35 dB
Flatness: ±0.2 dB relative to the slope
Slope: 1.5 dB
Impedance: 75 ohm

MECHANICAL

Dimensions: 48cm x 4.5cm x 39cm
Shipping Weight: 3.2kg.
Connections ("F" Type)
Input: 12
Output: 1
Test (Front Panel): 1

OC-12c
PASSIVE HEADEND
COMBINER
Stock No. 5953



BPF-a
VHF BANDPASS FILTER
Stock No. PAL I: J4414(*)
PAL B: B4414(*)
PAL D: D4414(*)

- High Rejection of Signals Outside its Bandpass, including Adjacent Channels
- Lower Adjacent Channel Sound Down 60 dB
- Upper Adjacent Channel Picture Down 60 dB
- Fits Standard Rack

BPF-a

The BPF-a is a VHF single-channel bandpass filter. It provides extremely high rejection of signals outside of its bandpass, including ajdacent channels. A BPF-a is available for any VHF channel to 300 MHz. Circuitry consists of a high-Q, six-stage bandpass filter and two phase cancellation traps.

BPF-a filters are recommended in adjacent channel headends, ahead of individual strip amplifiers. They are used to trap out undesired signals, sharpen amplifier selectivity, etc.

SPECIFICATIONS

ELECTRICAL

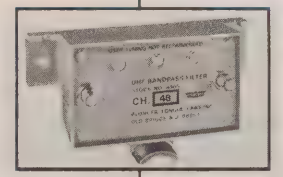
Frequency Range: 47 to 300 MHz
Bandpass: 5.0 MHz (PAL B), 5.5 MHz (PAL I), 6.0 MHz (PAL D) ±1.5 dB (47 to 212 MHz) +2/-1.5 dB (213 to 300 MHz)
Selectivity: Video Channel Filters
Lower Adjacent Audio Carrier: -60 dB
Upper Adjacent Video Carrier: -60 dB
Lower Adjacent Video: -40 dB
Upper Adjacent Sound: -50 dB for channels below 88 MHz and -45 dB all others
FM Filter: @82 MHz -30 dB, @114 MHz -22 dB;
Insertion Loss: 4.0 dB for channels below 88 MHz, 9.0 dB all others; 3.0 dB FM (90-108 MHz)
Bandpass Flatness: 1.5 dB FM
Impedance: 75 Ohm
Return Loss: FM 16 dB; all others 13 dB

MECHANICAL

Dimensions: 48cm x 4.5cm x 16cm
Shipping Weight: 1.4kg

BPF-U
UHF BANDPASS FILTER
Stock No. PAL I: J4805(*)
PAL G: B4805(*)
PAL K: D4805(*)

- Mounts On Antenna Mast or Flat Surface
- Selectivity Typically 17 dB Down 11 MHz from Channel Center
- Low On-channel Through Loss



BPF-U

The BPF-U is a single-channel UHF bandpass filter available for channels in the 470 to 890 MHz frequency range. Each channel passes a single UHF channel and attenuates all others. It can be mast or surface mounted indoor or outdoor.

SPECIFICATIONS

ELECTRICAL

Impedance, Input and Output: 75 ohms
Bandpass: 8 MHz (prealigned on channel)
Bandpass Flatness: ±0.2 dB
Thru Loss: 1.8 dB to 800 MHz; 2.5 dB 800 to 890 MHz
Selectivity: 17 dB, 11 MHz from channel center
30 dB, 17 MHz from channel center
40 dB, 23 MHz from channel center
48 dB, 27 MHz from channel center
55 dB, 33 MHz from channel center and beyond.

GENERAL

Temperature Range: -40°C to +74°C

MECHANICAL

Dimensions: 16cm x 6.7cm x 8.3cm
Shipping Weight: 0.9kg

CEF
CHANNEL ELIMINATION FILTER
Stock No. PAL I: J4416(*)
PAL B: B4416(*)
PAL D: D4416(*)

- Suppresses an Entire Channel Sufficiently to Allow Clean Re-insertion of Local Origination or Desired Channel
- Adjacent Channels are Virtually Unaffected
- CEF's May be Cascaded for Multiple Channel Deletions
- Non-interactive Alignment with Unique Coupling Circuits Enhances Stability

(*) Specify video carrier frequency or channel

CEF

The Blonder-Tongue CEF filters are single channel, non-power passing bandstop filters designed specifically for the attenuation of all frequencies within a television channel. Attenuation of 57 dB can be obtained on both video and audio carriers with only negligible loss to adjacent channel carriers. This results in the clean removal of any channel in a fully loaded distribution system and provides a means for substituting local origination or a desired channel for an unwanted channel.

Since the bandstop filter of the CEF is bi-directional, the front-surface mounted input/output connections are interchangeable.

A CEF is available for any VHF channel in the frequency range of 47 to 300 MHz.

SPECIFICATIONS

ELECTRICAL

Frequency Range: Eliminates any Channel in the frequency range of 47 to 300 MHz
Channel Suppression: 56 dB, video-audio carriers, 52 dB, above 230 MHz
Adjacent Channel Loss: 2.2 dB, upper video-lower audio carriers
Thru Loss: For units rejecting channels below 88 MHz, 1dB (50 to 300 MHz), 3dB (300 to 450 MHz); For units rejecting channels from 108 to 170 MHz, 2 dB (50 to 350 MHz), 3dB (300 to 450 MHz); For units rejecting channels from 170 to 300 MHz, 2 dB (50 to 300 MHz), 3dB (300 to 450 MHz)
Thruline Return Loss: 15 dB, Except adjacent channels

GENERAL

Temperature Range: -20°C to +65°C
Temperature Stability: ±50 KHz

MECHANICAL

Dimensions: 48cm x 4.5cm x 16cm
Shipping Weight: 2.8kg
Connectors: "F" Type, 1-Input; 1-Output

APARTMENT COMPLEX AMPLIFIERS - ACA SERIES

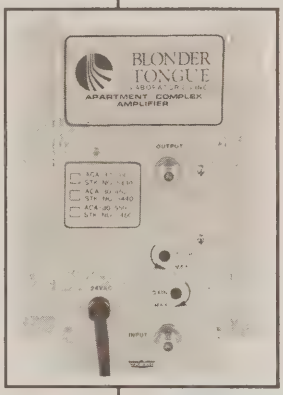
The Blonder Tongue ACA30-300, ACA30-450 and ACA30-550 are broadband one-way indoor hybrid distribution amplifiers designed for RF distribution systems whose input signal source is a "cable drop", the output of an MATV headend, or a small CATV headend. Three models are available, the #5700-33 with a 40 to 300 MHz bandpass, the #5700-34 with a 40 to 450 MHz bandpass and the #5700-35 with a 40 to 550 MHz bandpass.

All are designed for apartment house complex, hospital, prison or hotel applications. They have flat operational gain which is variable from 24 to 32 dB using a built-in gain control and have a slope control with 9 dB of range. Using a push-pull hybrid module as its gain block, they will deliver high output level signals with low distortion even in systems with 77 channels of programming.

The units are designed to provide long service at an affordable price. The aluminum chassis is designed to provide excellent heat dissipation, thus allowing operation at high ambient temperatures with no degradation of performance or reliability.

These high performance, single hybrid amplifiers are the obvious selection when the cost/performance parameters are extremely tight.

The units can be powered by 207 to 253 volts AC with the external power transformer supplied, or by 24 volts AC.



ACA-30-300
Stock No. 5700-33(*)

ACA-30-450
Stock No. 5700-34(*)

ACA-30-550
Stock No. 5700-35(*)

- Hybrid IC Circuitry for High Output with Low Distortion
- Exceptional Temperature Stability Range of -18°C to +60°C
- [illegible]

(*) Specify power plug (i.e. UK, Continental or U.S.)

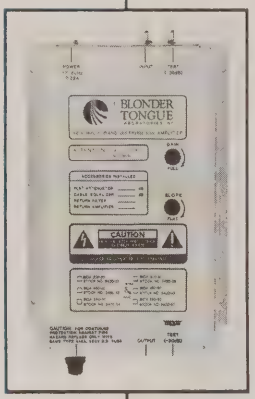
Model Stock No.	ACA-30-300 5700-33	ACA-30-450 5700-34	ACA-30-550 5700-35
Frequency Range (MHz)	40-300	40-450	40-550
Gain (dB)	32	32	32
Flatness (dB)	±0.5	±0.75	±1 dB
Gain Control Range (dB)	9	8	8
Slope Control Range (dB)	9	9	9
Input Return Loss (dB)	14	14	12
Output Return Loss (dB)	14	14	12
Noise Figure (dB)	6.5	7.5	8.0
No. of Channels (for CTB & XMD)	35	60	77
Output Level (dBμV)	+108	+106	+104
Composite Triple Beat (dB) [CTB]	-60	-60	-58
Crossmodulation (dB) [XMOD]	-61	-61	-61
2nd Order Intermodulation (dB)	-75	-75	-70
Hum Modulation (dB)	-65		
Input/Output Test Point Level (dB)	NA		
Operating Temperature Range	-18° to +60° C		
Power Supply Requirements			
@ 207 to 253 VAC, 50 Hz	0.125A		
@24 VAC, 50 Hz	0.65A		
Size (W x H x D)	14.3cm x 19cm x 5cm		
Shipping Weight	1.4kg		

Broadband Indoor Distribution Hybrid, Two-Way Amplifiers
NEW to 550 MHz

BIDA SERIES
Stock No. B5400 (XX) (*)

- 2 Gain Versions 30 dB and 50 dB
- 300 MHz, 450 MHz and 550 MHz Units
- Hybrid IC Circuitry for High Output with Low Distortion
- Exceptional Temperature Stability Range of -40°C to +60°C,
- Front Panel Gain and Slope Controls for Easy Adjustment
- Field Installable Options provide Two-Way Capability (Passive or Active)
- Externally Accessible Test Points Permit In-Service Testing
- Aluminum Chassis Designed for Superior Heat Dissipation to Insure Component Reliability
- External Fuse for Ease of Replacement
- LED Pilot Light
- Line Transient Protection

(*) Specify power plug (i.e. UK, Continental or U.S.)



BIDA SERIES

The BIDA series of amplifiers are completely self-contained broadband indoor distribution amplifiers, designed specifically for signal distribution systems requiring the low distortion characteristics only available using hybrid CATV integrated circuits. Useful either in systems which use a "cable drop" as a signal source or as the first stage of amplification in an MATV headend, these amplifiers are available in two gain versions, 30 dB and 50 dB, and with three different bandwidths, 47 to 300 MHz, 47 to 450 MHz or 47 to 550 MHz.

The basic amplifier can be configured for one-way or two-way operation. If configured for one-way operation it can be field upgraded to two-way by installing plug-in modules to provide either a passive or active 5 to 26 MHz return path.

The BIDA series provides flat 30 dB or 50 dB operating gain which can be reduced by 15 dB with the variable attenuator. Gain and slope controls are located on the front panel for fast set-up and adjustment. Two 30 dB backmatched test points are provided to permit testing without interruption of service.

In applications where input signal levels are too high or where greater cable equalization is necessary, the BIDA can be reconfigured by using plug-in attenuators and cable slope equalizers to meet particular system requirements.

Push-pull, hybrid IC modules enable the BIDA to operate at high output levels while retaining low distortion characteristics.

The aluminum chassis is designed to provide excellent heat dissipation, thus allowing operation at high ambient temperatures with no degradation of performance or reliability.

FIELD INSTALLABLE PLUG-IN ACCESSORIES FOR BIDA AMPLIFIERS

BIDA-RF RETURN FILTER SET
Stock No. B54011

This plug-in return filter adds a passive reverse path to BIDA series amplifiers. Each BIDA-RF Plug-In contains a high pass (47-550 MHz) and a low pass (5-26 MHz) filter element with a common (550 MHz) connecting point. A sheet metal cover is mounted over the circuitry to improve stability and prevent accidental detuning during shipping, handling, and installation. The filters separate sub-band (return) signals from VHF (forward) signals for processing within the amplifier. Two identical BIDA-RF units in the set make an amplifier bi-directional. A passive-return jumper wire is supplied to complete the sub-band path.

BIDA-FA-(†) FLAT ATTENUATOR
Stock No. 5410

These plug-in flat attenuator pads are used to reduce forward gain in BIDA series amplifiers. The BIDA-FA is available in fixed values of 6, 12, and 18 dB.

BIDA-RA RETURN AMPLIFIER
Stock No. B5402

This plug-in return amplifier adds reverse path gain to BIDA series amplifiers. The BIDA-RA is a sub-band (5-26 MHz) amplifier with 24 dB gain. It contains a 12 dB variable slope control and a 12 dB variable gain control. A BIDA-RF return filter set (B54011) is required to complete the system.

BIDA-CE CABLE EQUALIZER

Stock No. 5413 (for 300 MHz units) = BIDA-CE-3-(†)
Stock No. 5414 (for 450 MHz units) = BIDA-CE-4-(†)
Stock No. 5415 (for 550 MHz units) = BIDA-CE-5-(†)

These plug-in cable equalizers are used to increase forward slope in BIDA series amplifiers. The BIDA-CE provides attenuation that varies inversely with frequency to correct inherent tilt of coaxial cable used in distribution systems. A sheet metal cover is mounted over the circuitry to improve stability while preventing accidental detuning during shipping, handling, and installation. The BIDA-CE is available in fixed values of 6, 12, and 18 dB.

(†)Specify dB value

SPECIFICATIONS

Model Stock No.	BIDA 300-30[2] B5401-35	BIDA 300-50[2] B5401-55	BIDA 450-30[2] B5401-43	BIDA 450-50[2] B5401-45	BIDA 550-30[2] B5401-53	BIDA 550-50[2] B5401-55	BIDA RA #B5402[3,5] Forward	 Return
Frequency Range (MHz)	47-300	47-300	47-450	47-450	47-550	47-550	5-26	5-26
Gain (dB)	33	50	33	50	33	49	-1.0	24
Flatness (dB)[4]	±0.5	±0.5	±0.75	±0.75	±0.75	±0.75	±0.5	±0.5
Gain Control Range (dB)	17	17	15	15	15	15	—	≥12
Slope Control Range (dB)	10	10	10	10	10	10	—	≥12
Input Return Loss (dB)	14	14	14	14	14	14	16	16
Output Return Loss (dB)	14	14	16	16	14	14	16	16
Noise Figure (dB)	6.0	6.0	6.0	6.0	7.0	7.0	—	6.0
No. of Channels (for CTB & XMD)	35	35	60	60	77	77	—	—
Output Level (dBμV)	+108	+108	+106	+106	+104	+104	—	+102
Composite Triple Beat (dB) [CTB]	-60	-60	-60	-60	-58	-58	—	-60[6]
Crossmodulation (dB) [XMOD]	-61	-61	-61	-61	-61	-61	—	-60[7]
2nd Order Intermodulation (dB)	-75	-75	-75	-75	-70	-70	—	-72[8]
Hum Modulation (dB)	-65	-65	-65	-65	-65	-65	—	-65
Input/Output Test Point Level (dB)	-30	-30	-30	-30	-30	-30	—	—
Fuse	0.375A	0.375A	0.375A	0.375A	0.375A	0.375A	—	—
Operating Temperature Range	-20°to +60° C						—	—
Power Requirements	207 to 253 VAC, 50 Hz, 0.28A						+24 VDC @ 60 mA	
Connectors	RF In and Out - "F" Type, -30 dB Test Points In and Out - "F" Type						—	—
Size (H x W x D)	29cm x 18cm x 7cm						12cm x 3.5cm x 5.7cm	
Shipping Weight	2.6kg						85gr	
Plug-In Accessories .								
1) Flat Attenuator (6, 12, 18 dB)	#5410-(*)		#5410-(*)		#5410-(*)			
2) Cable Equalizer (6, 12, 18 dB)	#5413-(*)		#5414-(*)		#5415-(*)			
3) Return Filters (5 - 26 MHz)	#B54011		#B54011		#B54011			
4) Return Amplifier (5 - 26 MHz)	#B5402		#B5402		#B5402			

(*) Specify Value

NOTES

1. Specification chart represents overall performance between the BIDA amplifier's input and output connectors with various optional field installed modules.
2. One-way configuration represents basic amplifier as sold with factory installed 0 dB flat attenuator and 0 dB cable equalizer.
3. Two-way configuration represents basic amplifier with field installed sub-channel passive or active return modules.
4. Measured at full gain with 0 dB slope.
5. Reverse amplifier distortion specs are measured with Vo = 102 dBμV flat with three channel loading.
6. Single-Triple Beat
7. Vo = +108 dBμV
8. Vo = +108 dBμV

RMDA SERIES
Stock No. 5500 (XX) (*)

- Rack Mount Versions of BIDA and ACA Series Amplifiers
- Two Gain Versions, 30 dB and 50 dB
- 450 MHz and 550 MHz Units
- Hybrid IC Circuitry for High Output with Low Distortion
- Exceptional Temperature Stability Range
- Front Panel Gain and Slope Controls for Easy Adjustment
- Aluminum Chassis Designed for Superior Heat Dissipation
- Single or Dual Hybrid Modules
- Eight Rack Mount Units
- Available with Power Doubling Hybrids

(*) Specify power plug
(i.e. UK, Continental or U.S.)

The RMDA series of rack mount amplifiers are completely self-contained broadband distribution amplifiers, designed specifically for signal distribution systems requiring the low distortion characteristics only available using hybrid CATV integrated circuits. Useful either in systems which use a "cable drop" as a signal source or as the first stage of amplification in an MATV headend, these amplifiers are available in two gain-versions, 30 dB and 50 dB, with two different bandwidths, 40 to 450 MHz or 40 to 550 MHz.

These amplifiers are available with one or two hybrid amplifier gain blocks. The use of two gain block units with interstage controls provides superior noise performance along with an extended range of gain and slope. The single hybrid units provide good performance at a modest price. The combination of these two architectures in the RMDA line results in models with a wide range of performance features to satisfy simple or stringent applications. In addition, there are 30 dB gain versions with power doubling hybrids which increase the output level capability by 3 dB thereby increasing the reach.

This series provides flat operating gain which can be reduced with a variable attenuator. Gain and slope controls are located on the front panel for fast set-up and adjustment.

Two 20 dB backmatched test points are provided to permit testing without interruption of service. In applications where input signal levels are too high or where greater cable equalization is necessary, the units can be reconfigured by using plug-in attenuators and cable slope equalizers to meet particular system requirements. (This feature and the test points are not available on the lower performance units).

Push-pull, hybrid IC modules enable the RMDA to operate at high output levels while retaining low distortion characteristics.

The aluminum chassis is designed to provide excellent heat dissipation, thus allowing operation at high ambient temperatures with no degradation of performance or reliability.

SPECIFICATIONS[1]

Model Stock No.	RMDA 450-30 5500-43	RMDA 450-50 5500-45	RMDA 550-30 5500-53	RMDA 550-50 5500-55	RMDA 450-30P 5500P43	RMDA 550-30P 5500P53	RMDA 450-30S 5500S43	RMDA 550-30S 5500S53
Frequency Range (MHz)	40-450	40-450	40-550	40-550	40-450	40-550	40-450	40-550
Gain (dB)	33	50	33	50	33	33	32	32
Flatness (dB)	±0.75	±0.75	±0.75	±0.75	±0.75	±0.75	±0.75	±0.75
Gain Control Range (dB)	15	15	15	15	15	15	8	8
Slope Control Range (dB)	10	10	10	10	10	10	9	9
Input Return Loss (dB)	14	14	14	14	14	14	14	12
Output Return Loss (dB)	14	14	14	14	14	14	14	12
Noise Figure (dB)[2]	6.0	6.0	7.0	7.0	6.0	7.0	7.5	8.0
No. of Channels (for CTB & XMD)	60	60	77	77	60	77	60	77
Output Level (dBµV)	+106	+106	+104	+104	+106	+104	+106	+104
Composite Triple Beat (dB) [CTB]	-60	-60	-60	-58	-66	-66	-60	-58
Crossmodulation (dB) [XMOD]	-61	-61	-61	-61	-68	-69	-61	-61
2nd Order Intermodulation (dB)	-75	-75	-72	-70	-74	-73	-75	-70
Hum Modulation (dB)	-65	-65	-65	-65	-65	-65	-65	-65
Input/Output Test Point Level (dB)	-20 ± 2	-20 ± 2	-20 ± 2	-20 ± 2	-20 ± 2	-20 ± 2	NA	NA
Operating Temperature Range	-20° to +60°C	-20° to +60°C	-20° to +60°C	-20° to +60°C	-20° to +60°C	-20° to +60°C	-18° to +60°C	-18° to +60°C
Number of Hybrids	2	2	2	2	2	2	1	1
Type of Hybrids	Push-Pull	Push-Pull	Push-Pull	Push-Pull	Power Doubling	Power Doubling	Push-Pull	Push-Pull
Power Requirements	207-253 VAC @ 0.1 A	207-253 VAC @ 0.12 A	207-253 VAC @ 0.1 A	207-253 VAC @ 0.12 A	207-253 VAC @ 0.18 A	207-253 VAC @ 0.18A	207-253 VAC @ 0.12A or 24VAC @ 0.65A	207-253 VAC @ 0.12A or 24VAC @0.65A
Dimensions	48cm x 4.5cm x 13cm							
Shipping Weight	3.6kg							
RF Connectors	"F" Type							

NOTES

1. Specification chart represents overall performance between the RMDA amplifier's input and output connectors.
2. Measured at full gain with 0 dB slope.

1000 MHz Distribution Amplifier

ACA-35-1000
Stock No. 5470(*)

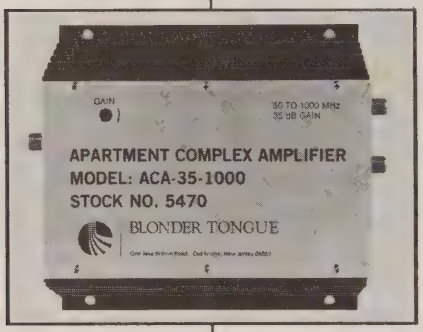
- 40 to 1000 MHz Coverage
- Push-Pull Amplifiers for Low Distortion
- Surface Mount Design
- Made in USA

(*) Specify power plug (i.e. UK, Continental or U.S.)

The ACA-35-1000 provides continuous coverage of all frequencies from 40 MHz to 1000 MHz. This indoor amplifier covers the full VHF and UHF bands as well as all CATV channels.

Utilizing push-pull amplifier stages and surface mounted devices, this state-of-the-art product is the ideal amplifier if distribution in the system includes UHF signals. It's 4.5 dB noise figure, 35 dB gain and superior distortion performance is available in a compact package. It is provided with a gain control to match the output level to the number of television sets in the system.

This product is supplied with a separate plug-in power transformer and has a -30 dB test point.



SPECIFICATIONS

ELECTRICAL

Bandwidth: 40 MHz to 1000 MHz
Flatness (50 to 1000 MHz): ±1 dB
Maximum Output Level Per Channel (40 to 1000 MHz, XMod -54 dBc),
Loading 6 Channels: +118 dBμV
12 Channels: +115 dBμV
24 Channels: +112 dBμV
48 Channels: +109 dBμV
Full Gain: 35 dB
Gain Control Range: +16 to +35 dB (19 dB)
Noise Figure at Full Gain (40 to 1000 MHz): 4.5 dB
Return Loss (Input/Output):
50 to 300 MHz: 15 dB Min. at 75 Ohms
300 to 800 MHz: 10 dB Min. at 75 Ohms
Output Test Point: -30 dB

GENERAL

Power Requirements:
Amplifier: 28 VAC Center Tapped, 0.5 A
Power Transformer: 207 to 253 VAC, 8 Watts
Temperature Range: 0 to 50° C

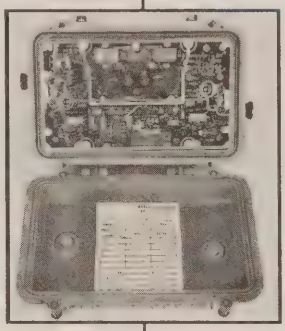
MECHANICAL

Dimensions: 15cm x 18.5cm x 4.4cm
Shipping Weight (Amplifier & Power Transformer): 1.7kg
Controls
Gain: On Case Top
Indicators
Power On: Red LED, On Case End
Connectors:
Amplifier
In/Out: Type "F", On Case End
Output Test Point (-30dB): Type "F", On Case End
Power Jack: 5-Pin DIN, On Case End

The PAL Series line extender station provides distribution amplification in both the 47 to 450 and 47 to 550 MHz spectrums. Its family of line extender modules includes both push-pull and power addition models.

These high technology line extender modules are engineered to provide low distortion at high output levels by employing the lowest distortion output hybrids suitable for line extender application. In addition, interstage loss is minimized, thus reducing input hybrid distortion. Finally, these modules employ low loss diplex filters and test points to minimize losses on the output side of the output hybrid (higher loss directional couplers are avoided). Modules are also provided with standard vernier controls for fine adjustment of the slope and gain.

All modules have built-in (hard-wired) reverse diplex filters to diplex the 5- 30 MHz return band. The reverse diplex filters are hard-wired at the factory. A reverse hybrid must be ordered separately to activate the return.



PAL SERIES

- Bandwidth - 1 GHZ Platform; 450/550 MHz Modules
- Hybrids - Power Addition or Push-pull
- Test Points - 30 dB with Access Through Ports on Housing Cover
- Slope/Gain - Continuous Vernier Controls
- Surge Protection - Standard Surge Plug-ins
- Housing Symmetry - Compact Housing may be Reversed to Satisfy all Applications
- Reverse Capability - Built-in Diplex Filters Require a Simple Plug-in Hybrid for 5-30 MHz Operation
- Thermal Compensation - Plug-in Option
- Built-in Diplex Filters
- Compatibility - Plug-in Compatibility with Popular Models
- Weather and RFI Proof

PAL SERIES DISTRIBUTION AMPLIFIERS

Model Stock No.	LPA-450 5670	LPAP-450 5682	LPAP-550 5688
Frequency Range (MHz)	5-30/47-450	5-30/47-450	5-30/47-550
Technology	Push-Pull Hybrid	Power Addition Hybrid	Power Addition Hybrid
Channel Loading	60	60	77
Minimum Full Gain (dB)	34	34	33
Frequency Response @ Reference Levels (dB)	±0.5	±0.5	±0.6
Gain Control Range (dB)	6	6	6
Slope Control Range (dB) (Cable @550 MHz)	6	6	6
Distortion at Reference Levels (Per NCTA Recommended Practices)			
Output Levels (dBμV)	97/106	97/106	97/106
Operating Gain (dB) (5)	32	32	32
Operating Slope (dB) (Cable @550 MHz Without Equalizer) (6)	2	2	2
Return Loss (dB)	16	16	16
Noise Figure (dB)	8.0	8.0	8.5
DIN 45005B (dBuV)	123	124	122
Composite Triple Beat (dB)	65	70	66
Crossmodulation (dB)	66	70	68
Composite 2nd Order (dB)	63	67	63
Hum Modulation (dB)	70	70	70
Max. AC Through Current (Amps)	7	7	7
Current Drain @60 VAC (Amps) (4)	0.46	0.48	0.48
Current Drain @24 VDC (Amps) (4)	0.67	0.87	0.67
Dimensions (W x H x D)	28cm x 15cm x 23cm	28cm x 15cm x 23cm	28cm x 15cm x 23cm
Shipping Weight (kg)	6.4	6.4	6.4

NOTES

1. Stated Station specifications include diplex filters (see note 4) and 1 dB for equalizer.
2. All specifications referenced to 20° C at recommended operating gain and slope.
3. All distortion measurements per NCTA recommended practices. Published specifications derived from typical station performance without cascade enhancement.
4. 5-30 MHz diplex filters built-in; for return band activation, order Option 1, 5-30 MHz, 22 dB gain hybrid. Current consumptions are indicated for unidirectional or bi-directional powering.
5. Thermal network Option 4 reduces operational gain of station by 1.5 dB @ 50 MHz, 3.5 dB @ 550 MHz.
6. When using the thermal compensator, operating slope is 0 dB.
7. Products shipped with return filters, a 0 dB pad and a 0 dB equalizer.

OPTIONS

Option 1: 5-30 MHz Return Amplifier, Stock No. 5678

Option 2: Fixed Pads, available in 6 and 12 dB values, Stock No. 5679. Please specify the value.

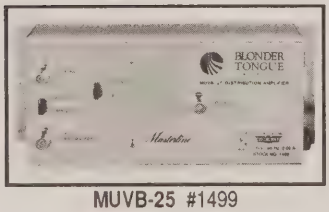
Option 3: 450 MHz Fixed Equalizer (Stock No. 5671) and 550 MHz Fixed Equalizer (Stock No. 5689), available in 6, 12 and 18 dB values for both ranges. Please specify the value.

Option 4: Thermal Equalizer, Stock No. 5680

- Wide Dynamic Range
- High Output Capability
- Low Noise Figure
- UHF and VHF/UHF Units Available
- 15 dB, 25 dB, 35 dB, 45 dB, and 57 dB Gain Units
- Units with Separate Frequency Band Antenna Inputs
- Units with Switchable FM Traps for Strong FM Signal Areas
- Lightning and Power Line Surge Protection
- Units with Tilt Control
- Units with Gain Control

(*) Specify power plug
(i.e. UK, Continental or U.S.)

MUVB-15 #1444



MUVB-25 #1499

The Masterline series of distribution amplifiers are designed for special purpose applications in the SMATV, MATV, and Wireless Cable markets. Used as amplifiers for Off-Air VHF, FM and UHF signals, these amplifiers provide high output and low noise amplification at a reasonable cost. The Masterline series is available with a wide choice of gain levels, bandwidths, and options so that a unit can be selected to fit almost any system; i.e. number of subscribers serviced by the system, the array of off-air channels present, and the signal strength of those signals.

Among the options available are automatic level control, separate antenna inputs for specific TV bands, FM traps

SPECIFICATIONS		MODEL STOCK NO.	MUVB-15 1444(*)	MUVB-25 1499(*)
Frequency Range (MHz)	LB (47 to 88 MHz)		X	X
	FM (88-108 MHz)		X	X
	MB (CATV 120-170 MHz)		X	X
	HB (170 to 230 MHz)		X	X
	UHF (470 to 900 MHz)		X	X
Gain (dB)	LB/FM		15	27
	MB			
	HB			
	UHF		18	
Gain Control Range	All Bands		N/A	N/A
BandPass Flatness (dB)	LB/FM		±0.5	±0.5
	MB			
	HB			
	UHF			±1.5
Output Capability (dBμV) (Note 1)	LB		110	110
	MB			
	HB			
	UHF		107	107
Noise Figure (dB)	LB		4.5	4.5
	MB			
	HB			
	UHF		5.0	5.0
Minimum Input (dBμV) (Note 2)	LB		+51.5	+51.5
	MB			
	HB			
	UHF		+52	+52
FEATURES				
Tunable FM Trap			X	
Switchable FM Stop Filter				X
Continuously Adjustable Gain Control				
Switchable Combined U/V or Separate U & V Input				
Rack Mountable (EIA 19")				
Switchable Combined LB/HB or Separate LB/HB Input				
Switchable Automatic Level Control (ALC)				
AC Convenience Outlet				
Switchable UHF Tilt Control				
Built-In UHF/VHF Combiner				
MECHANICAL				
Width (cm)			22	22
Height (cm)			8.6	8.6
Depth (cm)			6.5	6.5
Shipping Weight (Kg)			0.6	0.7

Note 1: Specified for 3 channels LB, 4 channels HB, 3 Channels UHF
Note 2: Specified for 46 dB S/N Ratio, "Picture Excellent"

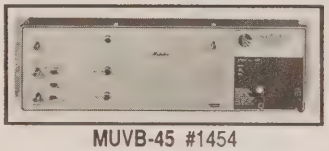
or stop filters and tilt control.

The use of split band amplification combined with the use of low noise input circuitry results in wide dynamic range where the output capability is exceptional.

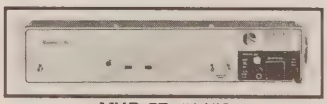
These products have power supply, lightning and surge protection thereby providing superior performance for years.

	MODEL	MUVB-35	MUVB-45	MUB-57
SPECIFICATIONS	STOCK NO.	1451(*)	1454(*)	1452(*)
Frequency Range (MHz)	LB (47 to 88 MHz)	X	X	
	FM (88-108 MHz)	X	X	
	MB (CATV 120-170 MHz)			
	HB (170 to 230 MHz)	X	X	
	UHF (470 to 900 MHz)	X	X	X
Gain (dB)	LB/FM	36	45	
	MB			
	HB	35	45	
	UHF	37	43	45
Gain Control Range	All Bands	18	18	18
BandPass Flatness (dB)	LB/FM	±0.5	±0.5	
	MB			
	HB	±0.75	±0.75	
	UHF	±1.5	±1.5	±1.5
Output Capability (dBµV) (Note 1)	LB	109	114	
	MB			
	HB	109	114	
	UHF	109	109	116.5
Noise Figure (dB)	LB	6.0	7.0	
	MB			
	HB	7.0	7.5	
	UHF	6.2	5.0	5.0
Minimum Input (dBµV) (Note 2)	LB	+53	+54	
	MB			
	HB	+54	+54.5	
	UHF	+53.2	+52	+52
FEATURES				
Tunable FM Trap				
Switchable FM Stop Filter		X	X	
Continuously Adjustable Gain Control		X	X	X
Switchable Combined U/V or Separate U & V Input		X	X	
Rack Mountable (EIA 19")			X	X
Switchable Combined LB/HB or Separate LB/HB Input			X	
Switchable Automatic Level Control (ALC)				X
AC Convenience Outlet				X
Switchable UHF Tilt Control				X
Built-In UHF/VHF Combiner				X
MECHANICAL				
Width (cm)		30	48	48
Height (cm)		13.2	13.2	10
Depth (cm)		4.5	6.7	6.7
Shipping Weight (Kg)		1.5	3.2	2

MUVB-35 #1451



MUVB-45 #1454



MUB-57 #1452

SUV - SERIES

- Low Cost with Performance to 900 MHz
- Cast Housing
- RF Shielding
- Mounting Tabs and Grounding Block

CRS - SERIES
CRSP - SERIES
CVS - SERIES

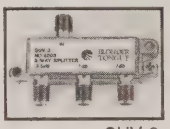
- In-Line and L-Versions
- Cast Housing
- RF Shielding
- Superior Performance to 600 MHz
- Mounting Tabs and Grounding Block
- RF & DC Power Passing in CRSP Series

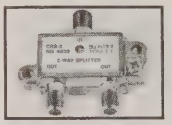
XRS SERIES

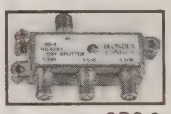
- Professional Grade
- Suits Most Stringent Loss Applications

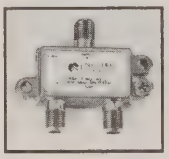
Blonder Tongue's complement of low loss splitters includes 1000 MHz, 900 MHz and 600 MHz units. Several in-line types are available with RFI shielding and one with power passing capability. L-shaped units with connectors at right angles to the mounting plane are also

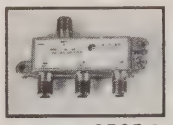
SUV-2

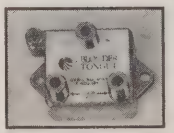

SUV-3


CRS-2


CRS-3


CRSP-2


CRSP-3


CVS-2

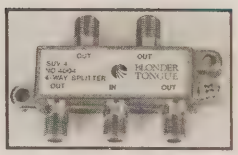
CVS-3

XRS-2

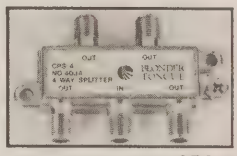
Product		Specifications		
Model	Stock No.	No. of Outputs	Frequency Range (MHz)	Splitter Loss (dB)
SUV-2	4002	2	10-900	4.0 (10 - 470 MHz) 4.5 (470 - 900 MHz)
SUV-3	4003	3	10-900	6.0 (10 - 50 MHz) 4.5 (50 - 470 MHz) 5.0 (470 - 900 MHz)
SUV-4	4004	4	10-900	7.5 (0 - 470 MHz) 9.0 (470 - 900 MHz)
SUV-8	4013	8	10-900	10.5 (10 - 470 MHz) 12.0 (470 - 900 MHz)
CRS-2	4032	2	5-600	3.5 (5 - 500 MHz) Max. 4.0 (500 - 600 MHz) Max.
CRS-3	4033	3	5-600	5.2 (5 - 500 MHz) Max. 5.5 (500 - 600 MHz) Max
CRS-4	4034	4	5-600	7.2 (5 - 500 MHz) Max. 8.0 (500 - 600 MHz) Max.
CRS-8	4038	8	5-600	12.0 (5 - 450 MHz) Max. 13.5 (450 - 600 MHz) Max.
CRSP-2	4072	2	5-600	3.5 (5 - 500 MHz) Max. 4.0 (500 - 600 MHz) Max.
CRSP-3	4073	3	5-600	3.5(1x) 6.5(2x) (5-500 MHz) Max. 4.0(1x) 7.0(2x) (500 - 600 MHz) Max.
CRSP-4	4074	4	5-600	6.5 (5 - 500 MHz) Max. 7.0 (500 - 600 MHz) Max.
CVS-2	4082	2	5-600	3.5 (5 - 500 MHz) Max. 4.0 (500 - 600 MHz) Max.
CVS-3	4083	3	5-600	5.2 (5-500 MHz) Max. 5.5 (500 - 600 MHz) Max
CVS-4	4084	4	5-600	7.2 (5-500 MHz) Max. 8.0 (500 - 600 MHz) Max.
CVS-8	4088	8	5-600	12.0 (5 - 450 MHz) Max. 13.5 (450 - 600 MHz) Max.
XRS-2	3472	2	5-1000	3.4 (5-500 MHz) 3.6 (500-860 MHz) 3.9 (860-1000 MHz)
XRS-4	3474	4	5-1000	6.9 (5-500 MHz) 7.3 (500-860 MHz) 7.6 (860-1000 MHz)

included. Professional performance is now available with superior specifications. With this variety of selections there is a unit to satisfy any application, no matter how strict the requirements.

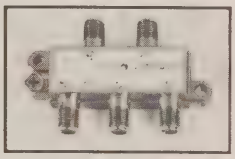
Specifications					
Input Return Loss (dB)	Isolation Between Outputs (dB)	Power Passing Capability	80 dB RFI Shielded	Connector Orientation	Application
14 (10 - 470 MHz) 8 (470 - 900 MHz)	14 (10 - 470 MHz) 18 (470 - 900 MHz)	N/A	YES	IN-LINE	VHF/UHF
18 (10 - 50 MHz) 12 (50 - 470 MHz) 12 (470 - 900 MHz)	20 (10 - 50 MHz) 18 (50 - 470 MHz) 18 (470 - 900 MHz)	NA			
13	20	NA			
7	18	NA			
17 Min.	27 Min.	NA	YES	IN-LINE	SMATV/ CATV
17 Min.	27 Min.	NA			
18 Min.	27 Min.	NA			
14 Min.	27 Min.	NA			
17 Min.	27 Min.	6 Amp	YES	IN-LINE	SMATV/CATV POWER PASSING
17 Min.	27 Min.	6 Amp			
17 Min.	27 Min.	6 Amp			
17 Min.	27 Min.	NA	YES	L-SHAPE	SMATV/ CATV
17 Min.	27 Min.	NA			
18 Min.	27 Min.	NA			
14 Min.	27 Min.	NA			
16 (5-40 & 860-1000 MHz) 25 (40-500 MHz) 20 (500-860 MHz)	22 (5-40 MHz) 30 (40-500 MHz) 26 (500-800 MHz) 24 (800-1000 MHz)	NA	YES	IN-LINE	PROFESSIONAL
18 (5-40 & 860-1000 MHz) 22 (40-500 MHz) 20 (500-860 MHz)	27 (5-500 MHz) 25 (500-1000 MHz)	NA			


SUV-4

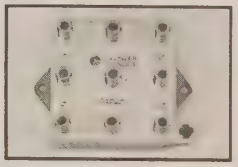
SUV-8

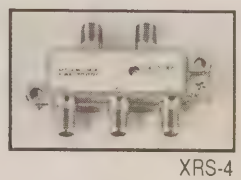

CRS-4

CRS-8


CRSP-4

CVS-4


CVS-8


XRS-4

Blonder Tongue's directional tap products are now available with 1, 2, 4 or 8 outputs, for operation to 900 MHz or optimized for modern 600 MHz CATV systems. Provided with superior RFI shielding and in a wide range of tap values, the large number of models available should provide an optimum choice for any application.

- Radiation Shielded
- Units Operating to 900 MHz
- Units Optimized for 600 MHz Operation
- Large Range of Tap Values
- 1, 2, 4, and 8 Way Taps
- Power Passing Units
- Professional Units Good to 600 MHz
- For Indoor and Outdoor Installation
- High Isolation and Excellent Return Loss for Stringent Applications
- Miniature and Rugged

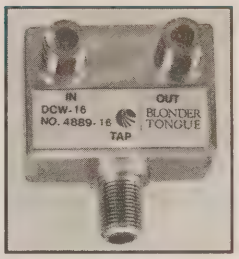
*NOTE: All Items Meet CATV & SMATV Requirements for RF Shielding.

		Specifications				
	Stock	Tap Value	No. of Outputs	Frequency Range (MHz)	Isolation Tap to Tap (dB)	Isolation Output to Tap (dB)
						5 - 470 MHz / 470 - 900 MHz
DCW	4889-4	4	1	5 to 900	N/A	20 / 18
	4889-6	6				22 / 20
	4889-9	9				24 / 20
	4889-12	12				30 / 24
	4889-16	16				30 / 26
	4889-20	20				36 / 30
	4889-24	24				36 / 30
	4889-27	27				40 / 30
	4889-30	30				40 / 30
						5 - 400 MHz / 400 - 900 MHz
CRT	4029-4	4	1	5 to 900	N/A	20 / 18
	4029-6	6				22 / 20
	4029-9	9				24 / 20
	4029-12	12				30 / 24
	4029-16	16				30 / 26
	4029-20	20				36 / 30
	4029-24	24				36 / 30
	4029-27	27				40 / 30
	4029-30	30				40 / 30
CRT-2A	4062-4	4	2	5 - 600	27 10-400 MHz; 25 400 - 550 MHz; 22 5-10 & 550-600 MHz	N/A
	4062-8	8				22 (5-400 MHz), 20 (400-500), 17 (500-600)
	4062-11	11				25 (5-400 MHz), 23 (400-500), 21 (500-600)
	4062-14	14				28 (5-400 MHz), 25 (400-500), 22 (500-600)
	4062-17	17				31 (5-400 MHz), 28 (400-500), 25 (500-600)
	4062-20	20				35 (5-400 MHz), 32 (400-500), 29 (500-600)
	4062-23	23				36 (5-400 MHz), 35 (400-500), 33 (500-600)
	4062-26	26				39 (5-400 MHz), 39 (400-500), 33 (500-600)
	4062-29	29				42 (5-400 MHz), 42 (400-500), 39 (500-600)
	4062-32	32				42 (5-400 MHz), 45 (400-500), 42 (500-600)
CRT-4A	4064-8	8	4	5 - 600	27 10-550 MHz; 22 5-10 & 550-600 MHz	N/A
	4064-11	11				24 (5-400 MHz), 24 (400-500), 21 (500-600)
	4064-14	14				27 (5-400 MHz), 25 (400-500), 21 (500-600)
	4064-17	17				31 (5-400 MHz), 26 (400-500), 23 (500-600)
	4064-20	20				33 (5-400 MHz), 31 (400-500), 27 (500-600)
	4064-23	23				37 (5-400 MHz), 34 (400-500), 29 (500-600)
	4064-26	26				39 (5-400 MHz), 37 (400-500), 31 (500-600)
	4064-29	29				42 (5-400 MHz), 40 (400-500), 35 (500-600)
	4064-32	32				44 (5-400 MHz), 42 (400-500), 38 (500-600)
	4064-35	35				46 (5-400 MHz), 45 (400-500), 40 (500-600)

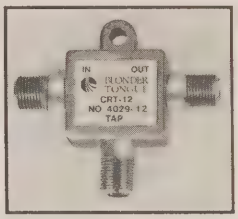
Model	Stock No.	Tap Value (dB)	No. of Outputs	Frequency Range (MHz)
DCE-8	4098	12.5, 13.5, 14.5, 15.5, 17.0, 17.5, 19.0, 19.5	8	5-860
DCE-4	4094	12.5, 13.5, 14.5, 15.5	4	5-860

Specifications					
Thru-Line Loss (dB)		Tap Down Loss (dB)	Input Return Loss (dB)		Power Passing Capability
5 - 470 MHz	470 - 900 MHz		5 - 470 MHz	470 - 900 MHz	
3.5	4.0	3.0 ±0.5 (5 - 470 MHz), 3.0 ±1.0 (470 - 900)	15	12	
3.0	3.5	6.0 ±0.5 (5 - 470 MHz), 6.0 ±1.0 (470 - 900)	15	13	
1.2	1.6	9.0 ±0.5 (5 - 470 MHz), 9.0 ±1.0 (470 - 900)	15	16	
0.9	1.5	12.0 ±0.5 (5 - 470 MHz), 12.0 ±1.0 (470 - 900)	20	18	
0.7	0.7	16.0 ±0.5 (5 - 470 MHz), 16.0 ±1.0 (470 - 900)	20	18	N/A
0.6	0.7	20.0 ±1.0 (5 - 900)	20	18	
0.5	0.6	24.0 ±1.0 (5 - 900)	20	18	
0.5	0.6	27.0 ±1.0 (5 - 900)	20	18	
0.5	0.6	30.0 ±1.0 (5 - 900)	20	18	
5 - 400 MHz	400 - 900 MHz		5 - 400 MHz	400 - 900 MHz	
3.5	4.0	3.0 ±0.5 (5 - 400 MHz), 3.0 ±1.0 (400 - 900)	15	12	
3.0	3.5	6.0 ±0.5 (5 - 400 MHz), 6.0 ±1.0 (400 - 900)	15	13	
1.2	1.6	9.0 ±0.5 (5 - 400 MHz), 9.0 ±1.0 (400 - 900)	15	16	
0.9	1.5	12.0 ±0.5 (5 - 400 MHz), 12.0 ±1.0 (400 - 900)	20	18	
0.7	0.7	16.0 ±0.5 (5 - 400 MHz), 16.0 ±1.0 (400 - 900)	20	18	N/A
0.6	0.7	20.0 ±1.0 (5 - 900)	20	18	
0.5	0.6	24.0 ±1.0 (5 - 900)	20	18	
0.5	0.6	27.0 ±1.0 (5 - 900)	20	18	
0.5	0.6	30.0 ±1.0 (5 - 900)	20	18	
N/A		3.5 ±1.0 (10 - 400 MHz), 3.5 ±1.5 (400 - 550), 3.5 ±2.5 (5 - 10 & 550 - 600)			
3.7 @5 MHz, 3.2 @300, 4.2 @450, 4.9 @500, 5.5 @600		7.7 ±1.0 (10 - 400 MHz), 7.7 ±1.5 (400 - 550), 7.7 ±2.5 (5 - 10 & 550 - 600)			
1.8 @5 MHz, 1.7 @300, 2.4 @450, 2.8 @500, 3.0 @600		11.0 ±1.0 (10-400 MHz), 11.0 ±1.5 (400-550), 11.0 ±2.5 (5-10 & 550-600)			
0.9 @5 MHz, 0.9 @300, 1.7 @450, 1.8 @500, 2.0 @600		14.0 ±1.0 (10-400 MHz), 14.0 ±1.5 (400-550), 14.0 ±2.5 (5-10 & 550-600)	20 10-400 MHz		
0.7 @5 MHz, 0.5 @300, 1.2 @450, 1.5 @500, 1.8 @600		17.0 ±1.0 (10-400 MHz), 17.0 ±1.5 (400-550), 17.0 ±2.5 (5-10 & 550-600)	16 (400-500 MHz),		N/A
0.7 @5 MHz, 0.4 @300, 1.0 @450, 1.1 @500, 1.3 @600		20.0 ±1.0 (10-400 MHz), 20.0 ±1.5 (400-550), 20.0 ±2.5 (5-10 & 550-600)			
0.5 @5 MHz, 0.4 @300, 0.7 @450, 1.0 @500, 1.2 @600		23.0 ±1.0 (10-400 MHz), 23.0 ±1.5 (400-550), 23.0 ±2.5 (5-10 & 550-600)	14 5-10 & 550-600 MHz		
0.5 @5 MHz, 0.4 @300, 0.7 @450, 1.0 @500, 1.2 @600		26.0 ±1.0 (10-400 MHz), 26.0 ±1.5 (400-550), 26.0 ±2.5 (5-10 & 550-600)			
0.5 @5 MHz, 0.4 @300, 0.7 @450, 1.0 @500, 1.2 @600		29.0 ±1.0 (10-400 MHz), 29.0 ±1.5 (400-550), 29.0 ±2.5 (5-10 & 550-600)			
0.5 @5 MHz, 0.4 @300, 0.7 @450, 1.0 @500, 1.2 @600		32.0 ±1.0 (10-400 MHz), 32.0 ±1.5 (400-550), 32.0 ±2.5 (5-10 & 550-600)			
N/A		8.0 ±1.0 (10 - 400 MHz), 8.0 ±1.5 (400 - 550), 8.0 ±2.5 (5 - 10 & 550 - 600)			
2.5 @5 MHz, 3.5 @300, 4.0 @400, 4.5 @500, 5.5 @600		11.0 ±1.0 (10-400 MHz), 11.0 ±1.5 (400-550), 11.0 ±2.5 (5-10 & 550-600)			
1.8 @5 MHz, 1.7 @300, 2.1 @400, 2.3 @500, 2.5 @600		14.0 ±1.0 (10-400 MHz), 14.0 ±1.5 (400-550), 14.0 ±2.5 (5-10 & 550-600)	20 10-400 MHz		
1.0 @5 MHz, 1.0 @300, 1.5 @400, 1.8 @500, 2.0 @600		17.0 ±1.0 (10-400 MHz), 17.0 ±1.5 (400-550), 17.0 ±2.5 (5-10 & 550-600)			
0.7 @5 MHz, 0.7 @300, 1.1 @400, 1.3 @500, 1.5 @600		20.0 ±1.0 (10-400 MHz), 20.0 ±1.5 (400-550), 20.0 ±2.5 (5-10 & 550-600)	17 400-550 MHz		N/A
0.7 @5 MHz, 0.6 @300, 0.8 @400, 1.2 @500, 1.3 @600		23.0 ±1.0 (10-400 MHz), 23.0 ±1.5 (400-550), 23.0 ±2.5 (5-10 & 550-600)			
0.5 @5 MHz, 0.5 @300, 0.7 @400, 1.0 @500, 1.1 @600		26.0 ±1.0 (10-400 MHz), 26.0 ±1.5 (400-550), 26.0 ±2.5 (5-10 & 550-600 MHz)	15 550-600 MHz		
0.5 @5 MHz, 0.5 @300, 0.7 @400, 0.8 @500, 1.0 @600		29.0 ±1.0 (10-400 MHz), 29.0 ±1.5 (400-550), 29.0 ±2.5 (5-10 & 550-600)			
0.5 @5 MHz, 0.5 @300, 0.7 @400, 0.8 @500, 1.0 @600		32.0 ±1.0 (10-400 MHz), 32.0 ±1.5 (400-550), 32.0 ±2.5 (5-10 & 550-600)			
0.5 @5 MHz, 0.5 @300, 0.7 @400, 0.8 @500, 1.0 @600		35.0 ±1.0 (10-400 MHz), 35.0 ±1.5 (400-550), 35.0 ±2.5 (5-10 & 550-600)			

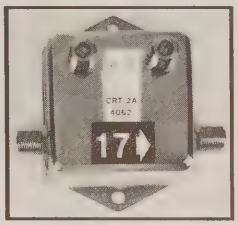
Insertion Loss (dB)	Isolation (dB) Output-Tap	Tap-Tap	Return Loss (dB) Input	Output	Tap	Passing Capability
8.5±1 dB	30 (5-400MHz) 26 (400-860 MHz)	40 (5-400MHz) 35 (400-860 MHz)	20	20	20	N/A
3.2±1 dB (5-400 MHz) 4.2±1 dB (400-860 MHz)	30 (5-400 MHz) 26 (400-860 MHz)	40 (5-400 MHz) 35 (400-860 MHz)	20	20	20	N/A



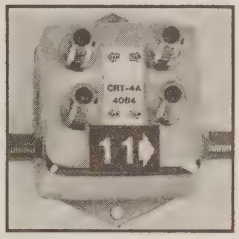
DCW



CRT



CRT-2A



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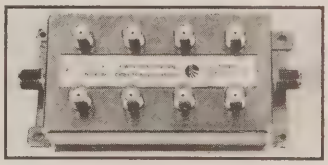
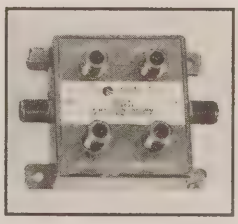

DCE-8


DCE-4

DMT DIRECTIONAL TAPS

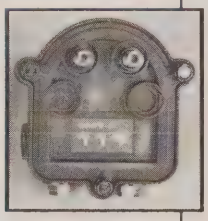
DMT-2C TWO-WAY
Stock No. 4051(*)

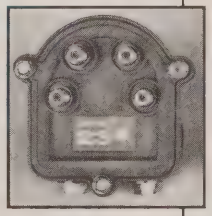
DMT-4C FOUR-WAY
Stock No. 4052(*)

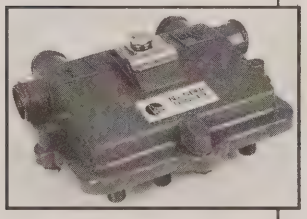
DMT-8C EIGHT-WAY
Stock No. 4055(*)

- 5 to 600 MHz Range
- Rotating Seizure Clamp for Pedestal or Aerial Mounting
- Weathersealed, RF Shielded Gasket
- 360 Aluminum with Polyurethane Coating for Corrosion Resistance
- Plated Brass "F" Connectors
- Stainless Steel Hardware

*Specify Tapdown Value







DMT

The Blonder Tongue line of 600 MHz directional taps is designed for both strand and pedestal mounting. The taps are made with the circuitry on the removable bottom plate for ease in changing tap values. Separator gaskets are used to provide weatherproofing and RFI integrity. 2-Way, 4-Way, and 8-Way taps are available, all with brass "F" connectors and drip wells. 360 aluminum housings with polyurethane coating insure maximum corrosion resistance.

SPECIFICATIONS

Tap-to-Tap Isolation: 26 dB, 10-550 MHz; 24 dB, 5-10, 550-600 MHz

Return Loss: 20 dB, 10-400 MHz; 18 dB, 400-550 MHz; 16 dB, 5-10, 550-600 MHz

Tap Loss: ±1 dB, 10-550 MHz; ±1.5 dB, 50-10, 550-600 MHz

Power Passing: 6 Amps, AC/DC

Impedance, All Ports: 75 Ohms

Model	Stock No.	Tap Value dB	Insertion Loss (dB) 5 MHz	300 MHz	450 MHz	500 MHz	600 MHz	Tap to Output Isolation (dB) 50-400 MHz	500 MHz	600 MHz
DMT-2c- 4	4051- 4	3.5	-	-	-	-	-	-	-	-
DMT-2c- 8	4051- 8	7.7	3.7	2.9	3.7	3.9	4.2	23	22	20
DMT-2c-11	4051-11	11	1.8	1.4	1.9	2.3	2.5	26	25	24
DMT-2c-14	4051-14	14	1.0	0.7	1.3	1.4	1.6	29	27	25
DMT-2c-17	4051-17	17	0.7	0.5	1.0	1.1	1.4	31	29	27
DMT-2c-20	4051-20	20	0.7	0.4	0.8	0.9	1.1	35	33	31
DMT-2c-23	4051-23	23	0.5	0.4	0.7	0.8	1.0	36	36	34
DMT-2c-26	4051-26	26	0.5	0.4	0.7	0.8	1.0	39	39	37
DMT-2c-29	4051-29	29	0.5	0.4	0.7	0.8	1.0	42	42	40
DMT-2c-32	4051-32	32	0.5	0.4	0.7	0.8	1.0	44	45	43
DMT-4c- 8	4052- 8	8	-	-	-	-	-	-	-	-
DMT-4c-11	4052-11	11	3.7	3.2	3.7	3.9	4.2	25	25	22
DMT-4c-14	4052-14	14	1.8	1.5	1.9	2.1	2.4	28	27	25
DMT-4c-17	4052-17	17	1.0	0.9	1.3	1.4	1.6	32	29	27
DMT-4c-20	4052-20	20	0.7	0.7	1.0	1.1	1.4	34	33	31
DMT-4c-23	4052-23	23	0.7	0.6	0.8	0.9	1.1	38	36	33
DMT-4c-26	4052-26	26	0.5	0.5	0.7	0.8	1.0	40	39	35
DMT-4c-29	4052-29	29	0.5	0.5	0.7	0.8	1.0	42	41	37
DMT-4c-32	4052-32	32	0.5	0.5	0.7	0.8	1.0	44	43	39
DMT-4c-35	4052-35	35	0.5	0.5	0.7	0.8	1.0	46	47	42
DMT-8c-11	4055-11	11	-	-	-	-	-	-	-	-
DMT-8c-14	4055-14	14	3.7	3.3	3.9	3.9	4.1	30	30	27
DMT-8c-17	4055-17	17	1.8	1.5	1.9	2.1	2.4	32	30	36
DMT-8c-20	4055-20	20	1.1	1.0	1.3	1.4	1.9	34	32	33
DMT-8c-23	4055-23	23	0.7	0.8	0.9	1.2	1.6	37	37	36
DMT-8c-26	4055-26	26	0.8	0.7	0.8	0.8	1.3	41	39	38
DMT-8c-29	4055-29	29	0.5	0.5	0.7	0.8	1.0	40	37	40
DMT-8c-32	4055-32	32	0.5	0.5	0.7	0.8	1.0	41	39	42
DMT-8c-35	4055-35	35	0.5	0.5	0.7	0.8	1.0	44	42	44
DMT-8c-38	4055-38	38	0.5	0.5	0.7	0.8	1.0	49	47	46

TLS

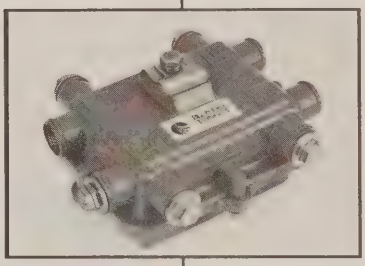
Blonder Tongue's TLS line of outdoor passives includes a two-way splitter and 8, 12 and 16 dB directional couplers. Providing coverage from 5 to 600 MHz, these passives have superior RF performance and greater than 10 amps power passing capability. Mechanically rugged due to their corrosion resistance, die-cast alloy construction, they have shrink tube bosses and are painted to provide resistance to basic corrosion agents. They are RFI and weather "tight." Now providing performance to 600 MHz, they are recommended for outdoor use in SMATV or cable TV distribution systems.

SPECIFICATIONS

		Insertion Loss (dB)			Isolation (dB) Out to Tap			Return Loss (dB)			Hum Modulation @ 10 Amps. (dB)			Coupler Value (dB)
Model	Stock No.	5 MHz	50 to 500 MHz	500 to 600 MHz	5 MHz	50 to 500 MHz	500 to 600 MHz	5 MHz	50 to 500 MHz	500 to 600 MHz	5 MHz	50 to 500 MHz	500 to 600 MHz	
TLS-3b	4044-3	4.3	4.3	4.5	25	25	24	18	20	18	70	70	64	4
TLS-8b	4044-8	2.7	2.4	3.0	15	25	24	18	20	18	70	70	64	8
TLS-12b	4044-12	1.6	1.6	1.9	17	25	24	18	20	18	70	70	64	12
TLS-16b	4044-16	1.2	1.2	1.4	17	25	24	18	20	18	70	70	64	16

Frequency Range: 5 to 600 MHz
Coupling Value: ±1.5 dB (5 MHz), ±1 dB (50 to 600 MHz)
Flatness: ±0.25 dB
Power Passing: 10 Amps, 60 VAC, Through In & Out Ports
Impedance, All Ports: 75 Ohms
Fusing: 16 Amps, Slo-Blow

TLS OUTDOOR PASSIVES



- Painted Corrosion-Proof Housing
- 100% RFI Integrity
- Stainless Steel Hardware
- 600 MHz Frequency Range
- Reinforced Seizure Posts
- Fused Output Ports

AC POWER SUPPLY

The 5998 AC Power Supply is designed to power CATV, SMATV and Data Communication line-powered amplifiers.

This unit is rugged, can be pole or pedestal mounted, and has superior regulation and surge protection. It has dual outputs which accept any 5/8-24 entry fitting.

The unit has an internal output test point and meters for voltage and current.

SPECIFICATIONS

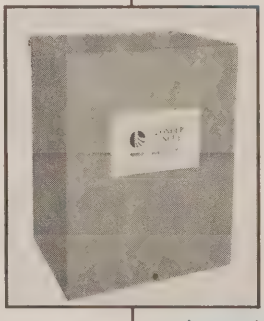
ELECTRICAL

Input Voltage Range: 180 to 260 VAC, 50 Hz (worst case) @ 15 Amp output.170 to 260 VAC, 50 Hz (worst case) @ 12 Amp output.
Output Voltage: 30 or 60 VAC ±1% (worst case)
Line Regulation: ±2% (worst case)
Load Regulation: ±2% (worst case)
Efficiency: 85%
Operating Temperature Range: -40°C to 65°C
Isolation at RFI Filter: 40 dB, 5 to 550 MHz
Automatic Time Delay: 12 to 15 seconds

MECHANICAL

Dimensions: 30cm x 33cm x 18cm
Shipping Weight: 24kg (Including Mounting Bracket)

AC POWER SUPPLY Stock No. 5998(*)



- 30 or 60 VAC Output
- 15 Amp Capacity
- Stable, Regulated Ferroresonant Design
- Overload Protected with 15 Amp Circuit Breaker
- Transient/surge Suppression with MDV
- Primary Power Entry Thru Top or Bottom
- Quasi-Square Wave Output
- Automatic Time Delay Circuitry to Prevent System Voltage Surge

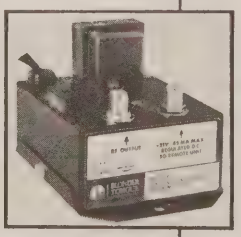
MODEL 1526 POWER SUPPLY

Delivers a regulated and surge-protected -21 volts DC at 40 mA. AC outlet provided for looping AC power from one power supply to another. UHV/VHF feed thru for duplexing power on coaxial cable.

SPECIFICATIONS

Output Voltage: -21 VDC
Maximum Load Before Deregulation:
40 mA at 210 VAC input
48 mA at 234 VAC input
56 mA at 260 VAC input
Ripple: Approx. 30 mV peak-to-peak at room temp.
Thru-Line Match: UHF 22 dB Return Loss
VHF 26 dB Return Loss
Thru-Line Loss: UHF 0.5 dB;
VHF 0.3 dB
Power Requirement: 230 VAC, 50 Hz, 0.04 A
Dimensions: 12cm x 8cm x 7cm
Shipping Weight: 0.7 kg

MODEL 1526 POWER SUPPLY Stock No. 1526(*)



- RF Feed Thru—Powers One Side of RF Thru Line Only
- Short Circuit Proof Regulator
- Compact, Lightweight Design

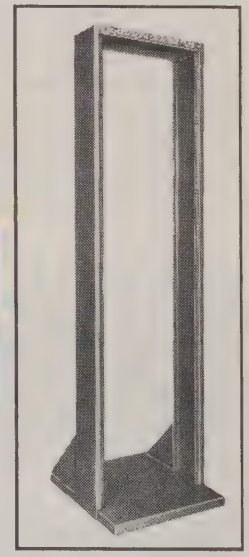
(*) Specify power plug (i.e. U.K., Continental or U.S.)

RELAY RACKS

- New Low Cost Racks
- Two Rack Heights

RELAY RACKS

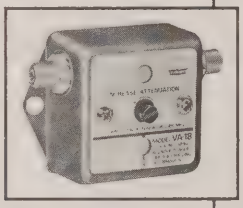
This line of relay racks are shipped knocked down, available at very reasonable prices, and designed to accept 19" panel widths with rails punched for EIA standard RS-310-C spacing. All use 12 gauge steel uprights.



SPECIFICATIONS

Stock No.	Upright Depth (cm)	Height (cm)	Shipping Weight (kg)	Special Features
3960	20.6	155.6	16.8	Low cost-shipped knocked down
3970	20.6	183.2	18.6	Low cost-shipped knocked down

VA-18 CONTINUOUSLY VARIABLE ATTENUATOR Stock No. 4890



VA-18

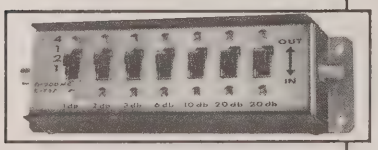
The VA-18 is a uniquely designed variable attenuator that provides any increment of attenuation up to 18 dB for signals between 54 and 900 MHz. Unlike switch-type attenuators, the rotary attenuation control on the VA-18 permits extremely fine attenuation settings that are not restricted to arbitrary, fixed switch-in values. Due to its slip clutch construction, the slotted adjustable shaft cannot be stripped by excessive rotation in either direction.

SPECIFICATIONS

Frequency Range: DC-900 MHz
Impedance: 75 ohms
Insertion Loss (Min. Attenuation) 0.2 dB (DC-300 MHz), 0.4 dB (300-500 MHz), 1.0 dB (500-700 MHz), 1.4 dB (800 MHz), 2.0 dB (900 MHz)
Attenuation Range (50-900 MHz): 18 dB

Return Loss	***At Min. Attenuation Settings***	***At Max. Attenuation Settings***
DC-300 MHz:	21 dB	13 dB
300-820 MHz:	14 dB	8 dB
820-900 MHz:	12 dB	6 dB

SA-7U SLIDE SWITCH ATTENUATOR Stock No. 4121



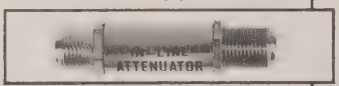
SA-7U

The SA-7U variable, slide switch attenuator covers the entire UHF/VHF frequency range, providing 62 dB total attenuation, slide switchable in 1 dB steps. The unit has 75 ohm impedance, uses "F" connectors and covers the DC-900 MHz frequency range.

SPECIFICATIONS

Frequency Range: DC to 900 MHz
Impedance: 75 Ohm
Return Loss: DC to 300 MHz, 22 dB; 300 to 806 MHz, 21 dB; 800 to 900 MHz, 14 dB
Insertion Loss (min. attenuation): 0.25 dB @ 50 MHz; 0.5 dB @ 220 MHz; 1.0 dB @ 450 MHz and 1.5 dB @ 900 MHz
Attenuation: 62 dB in 1 dB increments; 7 steps, 1 dB, 2 dB, 3 dB, 6 dB, 10 dB, 12 dB, and 20 dB
Dimensions: 16cm x 5cm x 3cm
Shipping Weight: 0.3kg

FIXED ATTENUATORS FAF Stock No. 3434 (*)



FAM Stock No. 4006 (*)

(*) Specify Attenuation

FAF & FAM

The FAF & FAM fixed attenuator pads are designed for in-line applications. They provide accurate attenuation and excellent match over the frequency range of 10 to 890 MHz. They are available in 3, 6, 10, 12, & 20 dB attenuation values, and have 75 Ohm characteristic impedance. The FAM is provided with a male "F" connector at one port and a female at the other. The FAF has female "F" connectors at both ports.

SPECIFICATIONS

Frequency Range: 10 to 890 MHz
Attenuation Values: 3,6,10,12 and 20dB as specified by customer
Return Loss: 28dB, 10 to 50 MHz; 22dB, 50 to 300 MHz; 20 dB, 300 to 470 MHz; 18 dB, 470 to 890 MHz.
Size: 1.3cm O.D. x 5cm Long (6.4cm Long for FAF)
Weight: 20g

6900 SERIES ANTENNAS

The 6900 line of spun aluminum TVRO antennas and mounts are the most popular antennas in the United States. These EL-AZ antennas are available in 1.8, 2.4, 3.0, 3.6, 4.2, 4.5 and 5.0 meter sizes. Feedhorns and LNB's are also available. The surface tolerances are so tightly controlled that gain, sidelobes and noise temperature performance are exceptional.

For the combination or components which meet your requirements, contact our Systems Engineering Department.

Satellite Antennas

Stock No.	6918	6924	6930	6936	6942	6945	6950
Antenna Size	1.8 Meter	2.4 Meter	3 Meter	3.6 Meter	4.2 Meter	4.5 Meter	5 Meter
Gain @4 GHz (dB)	36.1	38.6	40.6	42.3	43.5	43.9	44.3
Gain @12 GHz (dB)	45.6	48.2	49.9	51.5	53.0	53.3	54.2
Beamwidth -3 dB @ 4 GHz (Degrees)	2.8	2.1	1.7	1.4	1.2	1.1	1.05
Beamwidth -3 dB @ 12 GHz (Degrees)	0.95	0.7	0.55	0.48	0.4	0.35	0.33
Cross Polarization Isolation Port-Port (dB)	35						
Antenna Noise Temperature @ 4 GHz (Degrees Kelvin) @10° Elevation	42°	41°	40°	39°	37°	37°	36°
@20° Elevation	36°	35°	34°	35°	34°	34°	32°
@30° Elevation	32°	31°	30°	29°	30°	30°	27°
@40° Elevation	28°	27°	26°	25°	26°	26°	22°
@50° Elevation	25°	24°	23°	22°	22°	22°	19°
@60° Elevation	22°	21°	20°	19°	18°	18°	16°

Survival/Operational Wind Velocity

Survival: 160 KPH

Operational @ 4 GHz: 120 KPH

Operational @ 12 GHz: 100 KPH

6900 SERIES TVRO ANTENNAS

- Spun Aluminum Dish-High Precision
- Dish Size to Fit Most Applications 1.8 to 5 Meters
- EL-AZ Mounts
- Rugged - Up to 160 KPH Wind Survival
- Ku-band and C-band

2.8 METER ANTENNAS

The Model 6170 and 6171 Satellite Earth Station Antennas are high performance, low cost commercial systems designed for use in receive-only video, voice and data applications.

The reflector is a deep drawn, eight section antenna produced in high volume utilizing ultra precision draw dies. Each panel is identical thus easing installation and subsequent panel retrofitting. Panels have a closed corner configuration adding strength and rigidity to the reflector structure. All flange mounting holes are die pierced for uniform accuracy yielding a high tolerance, sectional reflector surface.

Each component of the mount and reflector is painted utilizing the latest powder coating technology. The reflector substrate is mill galvanized for superior corrosion resistance.

The reflector sections and integrated mount are shipped palletized in two cartons.

SPECIFICATIONS

	MODEL 6170 C-BAND	MODEL 6171 KU-BAND
Frequency:	3.7 - 4.2 GHz	11.7 - 12.2 GHz
Gain:	40.1 dBi	48.1 dBi
VSWR:	1.30:1	1.30:1
3dB Beamwidth:	1.8°	0.7°
First Sidelobe:	-17 dB	-17 dB
Antenna Noise Temperature at 30° Elevation	31°K	33°K
Cross Polarization Isolation: (On Axis)	-30 dB	-30 dB

Options

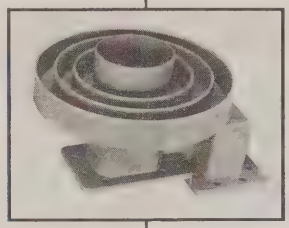
Ground Mount
Ballast Roof Mount
Receive-Only Feeds
Dual Band Feeds
Deicing

2.8 METER ANTENNAS MODEL 6170 (C-Band) Stock No. 6170 MODEL 6171 (Ku-Band) Stock No. 6171

- Prime Focus Type Feed
- Galvanized and Painted Sectional Reflector
- Stiff Rugged Mount for Excellent Pointing Accuracy in Ku-Band Applications
- Easy Installation
- Cost Effective

DUAL FEEDHORN FOR SPUN ALUMINUM ANTENNAS
Stock No. 6177, 6187, 6188

- Recommended for 6900 Series Antennas
- 3 Models—C-band, Ku-band and C/Ku-band



FEEDHORNS

Blonder Tongue's line of antenna feeds provides C-band and Ku-band coverage of both polarities. Three different feeds are available: a dual polarization C-band feed, a dual polarization Ku-band feed and a dual band (C & Ku) dual polarization feed. These feeds are compatible with all LNB's designed for these frequencies.

Designed with orthomode feeds, these horns provide simultaneous reception of both polarities for use in commercial, multiple receiver applications (i.e., schools, hotels, hospitals, apartment buildings or CATV systems).

These feeds are designed for use with Blonder Tongue's 6900 series antennas and 6100 series LNB's.

Dual Polarization Feeds

Band	C-band	Ku-band	C-band and Ku-band
Stock No.	6177	6187	6188
Frequency Range (GHz)	3.7 to 4.2	10.9 to 12.75	3.7 to 4.2 11.7 to 12.75
F/D Range	0.3 to 0.45	0.33 to 0.45	0.32 to 0.45
VSWR	1.2 to 1	1.5 to 1	1.6 C-band 1.4 Ku-band
Isolation between Polarities	35 dB	25 dB (min)	18 dB C-band 25 dB Ku-band
RF Ports	(2) WR 229	(2) WR 75	(2) WR 229 (2) WR 75
Dimensions	16.5cm x 12.7cm	12.5cm x 6.3cm x 7.5cm	22cm x 20cm x 14cm
Weight	3.2 Kg	.26 Kg	1.4 Kg

SATELLITE SYSTEM ACCESSORIES

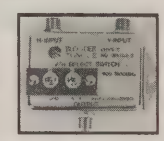
LINE AMPLIFIER
Model: ESA-1
Stock No. B6106

Frequency Range: 900 to 1800 MHz
Noise Figure: 3.5 dB
Gain: 20 dB
Power: 15 to 18VDC, 25mA
DC Power Passing
Connector: "F" Type female
Weather Boot included for outdoor use

V/H SELECT SWITCH
(Common Coaxial Cable Type)
Model: EHVS-L
Stock No. B6104-2

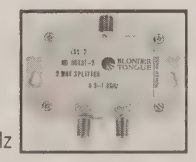
Frequency Range: 900 to 2000 MHz
Insertion Loss: 4 dB
Isolation: 32 dB
Impedance: 75 ohms
Switch Voltage: -15V, +15V, 50 mA

V/H SELECT SWITCH
(Separate Wire Type)
Model: EHVS-T
Stock No. B6104-3



Frequency Range: 900 to 2000 MHz
Insertion Loss: 4 dB
Isolation: 32 dB
Impedance: 75 ohms
Switch Voltage: -15V, +15V, 50 mA

2-WAY POWER DIVIDER
Model: ESS-2
Stock No. B6131-2

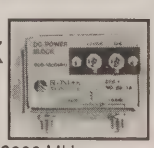


Frequency Range: 900 to 1800 MHz
Insertion Loss: 4.9 dB
Isolation: 20 dB
One Port Power Passing
Connectors: "F" Type female

4-WAY POWER DIVIDER
Model: ESS-4
Stock No. B6131-4

Frequency Range: 900 to 1800 MHz
Insertion Loss: 9 dB
Isolation: 20 dB
One Port Power Passing
Connectors: "F" Type female

DC POWER BLOCK
Model: EPB-1
Stock No. B6118

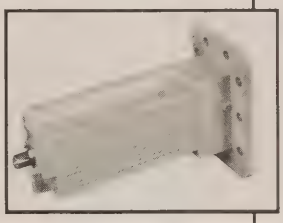


Frequency Range: 900 to 2000 MHz
Insertion Loss: 0.5 dB
Impedance: 75 ohms
Connectors: "F" Type female

LNB-C-BAND/Ku-BAND

The 6100 Series C-band and Ku-band LNB's, available in different noise temperatures, incorporate the latest HEMT technology in a compact design. HEMT technology facilitates consistently lower noise temperatures resulting in enhanced video and audio reception. The 6100 Series is weatherproof and features very stable performance over wide temperature ranges, making it an ideal solution for low cost audio and video applications.

These units have built-in protection against reverse polarity surge voltage or lightning.



SPECIFICATIONS

Band	C-BAND	Ku-BAND	Ku-BAND	Ku-BAND
Stock No.	6160	6137	6138	6139
Input Frequency Range (GHz)	3.7 to 4.2	11.7 to 12.5	10.95 to 11.7	12.25 to 12.75
Output Frequency Range (MHz)	950 to 1750	950 to 1750	950 to 1700	950 to 1450
L.O. Frequency	5150 MHz	10.75 GHz	10 GHz	11.3 GHz
L.O. Stability (-40°C to +60°C)	±500 KHz	±500 KHz	±500 KHz	±500 KHz
Noise Temperatures Available (Noise Figure)	45°, 40°, 35° 30° and 25° K	1.5 to 0.8 dB	1.3 to 0.7 dB	1.4 to 0.8 dB
Gain (dB)	64 (60 min)	60	60	60
Gain Flatness	±0.5 dB per 40 MHz	±2 dB per 500 MHz	±2 dB per 500 MHz	±2 dB per 500 MHz
1 dB Gain Compression	0 dBm (min)	0 dBm (min)	0 dBm (min)	0 dBm (min)
Third Order Intercept	+10 dBm	+10 dBm	+10 dBm	+10 dBm
Image Rejection	40 dB (min)	45 dB (min)	45 dB (min)	45 dB (min)
Power Supply	+15 to +22 V @ 150 mA	+14.5 to +22 V @ 150 mA	+14.5 to +22 V @ 150 mA	+14.5 to +22 V @ 150 mA
Input Flange	CPR 2296	WR-75	WR-75	WR-75
Output Connector	F-Female	F-Female	F-Female	F-Female
Weight	425g	350g	350g	350g
Temperature Range	-40° to +60°C	-40° to +60°C	-40° to +60°C	-40° to +60°C
Humidity	0 to 100%	0 to 100%	0 to 100%	0 to 100%

LNB
Stock No. 6160, 6137, 6138, 6139(*)

- C-band and Ku-band Models
- Proven Field Failure Rate of Less than 0.4% Annually
- The Latest HEMT Technology in a Compact Design
- Weighs Only 425g/350g
- Available in a Wide Range of Noise Temperatures
- 60 dB Gain
- Graded by Gain and Noise Temperature
- Superior Lightning and Surge Protection

(*) Specify noise temperature (or noise figure)

BLONDER TONGUE LABORATORIES, INC.

TV System Design Checklist

1. Company Name: _____
2. Address: _____
   _____
3. Phone and Fax No.: _____
4. Project Name: _____
5. Project Location: _____
   (Coordinates, If Known) _____
6. Budgetary B.O.M. For Preparing Quotation? _____
7. Final System Design (Drawings and B.O.M.)? _____
   (Revisions To The final Design May Be Subject To Engineering Fees).
8. Written Specifications for the Project.
9. Channels To Be On The System:
   (A) Off-Air VHF. _____
   (B) Off-Air UHF. _____
   (Desired Conversions) _____
   (C) Local Origination. _____
   (D) Programming Via Satellite. _____
   (E) CATV Feed No. of Channels _____
   (Is CATV Feed: Std, HRC, IRC, Frequency)
10. Site Plans.
    (A) Scale Of 400 or 500:1.
    (B) Antenna & Headend Location Indicated.
    (C) Preferred Cable Routing. Building Entry.
    Points and Road Crossings Indicated.
    (D) Aerial or Underground.
    (E) If Underground, Indicate Manholes or Pedestal Locations.
    (F) Cable Type.
11. Building Plans.
    (A) Scale of 50 or 100:1.
    (B) Antenna & Headend Location.
    (C) Outlet Locations.
    (D) Cable Routing or Conduit Runs. (Looping, Horizontal in Corridor or Vertical Risers).
    (E) Cable Type.

Note: If scale drawings are not available, riser diagrams and/or sketches must have point-to-point distances indicated.

Mail to: Applications Department
Blonder Tongue Laboratories, Inc.
One Jake Brown Road
Old Bridge, NJ 08857-1000
Tel. No. (908) 679-4000 - Fax No. (908) 679-4353

Please copy. Maintain original for future use.

Ref. No. 93-3-1A

BLONDER TONGUE LABORATORIES, INC.

Factory Prefabricated Headend Checklist

1. Company Requesting Quotation: _____

2. Reply To: (Name) _____

   (Tel. No., Fax. No.) _____

3. Project Name: _____

4. Project Location or Coordinates: _____

5. Off/Air Channels, Signal Levels, & Distance in Miles:

   (A) VHF. _____

   (B) UHF. _____

   (C) Type of Antennas? Single Channel, Broadband (circle one)

   Note: If Input is CATV Feed, are Frequencies; Standard, HRC, or IRC (circle one)

6. Local Origination: (VCR, Camera, Etc.) _____

7. TVRO Reception: C-Band, Ku-Band (circle one)

   No. of Satellites To Be Viewed _____

   No. of Transponders On Each _____

   No. of Polarizations _____

8. TVRO Antenna: Type & Size _____

9. TVRO Receiver: IRD or Rec'vr Only _____

   If Receiver Only: Allow Room for Decoders? Yes_____ No_____

   If Yes, How Many? What Type? _____

10. Open Rack, Frame, or Cabinet? (circle one)

    Locking Door(s)? Front, Rear, Both (circle one)

11. Are Modulators with Separate IF Loops for Scrambling Required?

    Yes_____ No_____

    If Yes, How Many? _____

12. Headend Output Frequency Assignments? Standard, HRC, or IRC (circle one)

13. Headend Output Level Required after combining?_____

14. Use back of form for special instructions and/or comments.

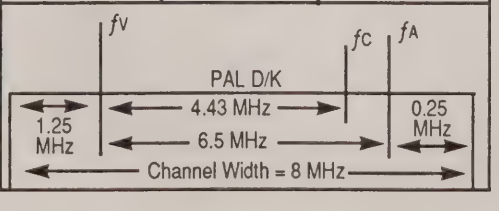
Mail to: **Applications Department**
Blonder Tongue Laboratories, Inc.
One Jake Brown Road
Old Bridge, NJ 08857-1000
Tel. No. (908) 679-4000 - Fax No. (908) 679-4353

Please copy. Maintain original for future use.

Ref. No. 93-3-2A

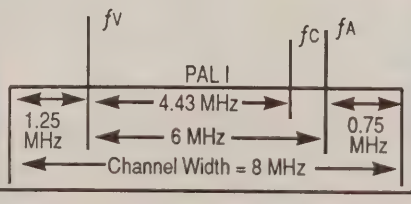
FREQUENCY ALLOCATION CHART
PAL D/K

PAL D			PAL K		
CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)	CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)
IF	38.9	32.4	DS-13	471.25	477.75
DS-1	49.75	56.25	DS-14	479.25	485.75
DS-2	57.75	64.25	DS-15	487.25	493.75
DS-3	65.75	72.25	DS-16	495.25	501.75
DS-4	77.25	83.75	DS-17	503.25	509.75
DS-5	85.25	91.75	DS-18	511.25	517.75
			DS-19	519.25	525.75
Z-1	112.25	118.75	DS-20	527.25	533.75
Z-2	120.25	126.75	DS-21	535.25	541.75
Z-3	128.25	134.75	DS-22	543.25	549.75
Z-4	136.25	142.75	DS-23	551.25	557.75
Z-5	144.25	150.75	DS-24	559.25	565.75
Z-6	152.25	158.75			
Z-7	160.25	166.75	DS-25	607.25	613.75
			DS-26	615.25	621.75
DS-6	168.25	174.75	DS-27	623.25	629.75
DS-7	176.25	182.75	DS-28	631.25	637.75
DS-8	184.25	190.75	DS-29	639.25	645.75
DS-9	192.25	198.75	DS-30	647.25	653.75
DS-10	200.25	206.75	DS-31	655.25	661.75
DS-11	208.25	214.75	DS-32	663.25	669.75
DS-12	216.25	222.75	DS-33	671.25	677.75
			DS-34	679.25	685.75
Z-8	224.25	230.75	DS-35	687.25	193.75
Z-9	232.25	238.75	DS-36	695.25	701.75
Z-10	240.25	246.75	DS-37	703.25	709.75
Z-11	248.25	254.75	DS-38	711.25	717.75
Z-12	256.25	262.75	DS-39	719.25	725.75
Z-13	264.25	170.75	DS-40	727.25	733.75
Z-14	272.25	278.75	DS-41	735.25	741.75
Z-15	280.25	286.75			
Z-16	288.25	294.75	DS-42	743.25	749.75
			DS-43	751.25	757.75
Z-17	296.25	302,.75	DS-44	759.25	765.75
Z-18	304.25	310.75	DS-45	767.25	773.75
Z-19	312.25	318.75	DS-46	775.25	781.75
Z-20	320.25	326.75	DS-47	783.25	789.75
Z-21	328.25	334.75	DS-49	791.25	797.75
Z-22	336.25	342.75	DS-49	799.25	805.75
Z-23	344.25	350.75	DS-50	807.25	813.75
Z-24	352.25	358.75	DS-51	815.25	821.75
Z-25	360.25	366.75	DS-52	823.25	829.75
Z-26	368.25	374.75	DS-53	831.25	837.75
Z-27	376.25	382.75	DS-54	839.25	845.75
Z-28	384.25	390.75	DS-55	847.25	853.75
Z-29	392.25	398.75	DS-56	855.25	861.75
Z-30	400.25	406.75			
Z-31	408.25	414.75			
Z-32	416.25	422.75			
Z-33	424.25	430.75			
Z-34	432.25	438.75			
Z-35	440.25	446.75			
Z-36	448.25	454.75			



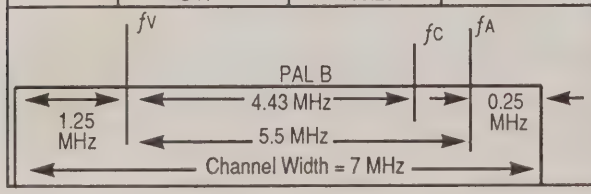
FREQUENCY ALLOCATION CHART
PAL I

PAL I HRC			PAL I HRC			PAL I STANDARD UHF		
CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)	CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)	CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)
IF	38.9	32.9	49	440.0	446.0	21	471.25	477.25
1	56.0	62.0	50	448.0	454.0	22	479.25	485.25
2	64.0	70.0	51	456.0	462.0	23	487.25	493.25
3	72.0	78.0	52	464.0	470.0	24	495.25	501.25
4	80.0	86.0	53	472.0	478.0	25	503.25	509.25
5	88.0	94.0	54	480.0	486.0	26	511.25	517.25
6	96.0	102.0	55	488.0	494.0	27	519.25	525.25
7	104.0	110.0	56	496.0	502.0	28	527.25	533.25
8	112.0	118.0	57	504.0	510.0	29	535.25	541.25
9	120.0	126.0	58	512.0	518.0	30	543.25	549.25
10	128.0	134.0	59	520.0	526.0	31	551.25	557.25
11	136.0	142.0	60	528.0	534.0	32	559.25	565.25
12	144.0	150.0	61	536.0	542.0	33	567.25	573.25
13	152.0	158.0	62	544.0	550.0	34	575.25	581.25
14	160.0	166.0	63	552.0	558.0	35	583.25	589.25
15	168.0	174.0	64	560.0	566.0	36	591.25	597.25
16	176.0	182.0	65	568.0	574.0	37	599.25	605.25
17	184.0	190.0	66	576.0	582.0	38	607.25	613.25
18	192.0	198.0	67	584.0	590.0	39	615.25	621.25
19	200.0	206.0	68	592.0	598.0	40	623.25	629.25
20	208.0	214.0				41	631.25	637.25
21	216.0	222.0				42	639.25	645.25
22	224.0	230.0				43	647.25	653.25
23	232.0	238.0				44	655.25	661.25
24	240.0	246.0				45	663.25	669.25
25	248.0	254.0				46	671.25	677.25
26	256.0	262.0				47	679.25	685.25
27	264.0	270.0				48	687.25	693.25
28	272.0	278.0				49	695.25	701.25
29	280.0	286.0				50	703.25	709.25
30	288.0	294.0				51	711.25	717.25
31	296.0	302.0				52	719.25	725.25
32	304.0	310.0				53	727.25	733.25
33	312.0	318.0				54	735.25	741.25
34	320.0	326.0				55	743.25	749.25
35	328.0	334.0				56	751.25	757.25
36	336.0	342.0				57	759.25	765.25
37	344.0	350.0				58	767.25	773.25
38	352.0	358.0				59	775.25	781.25
39	360.0	366.0				60	783.25	789.25
40	368.0	374.0				61	791.25	797.25
41	376.0	382.0				62	799.25	805.25
42	384.0	390.0				63	807.25	813.25
43	392.0	398.0				64	815.25	821.25
44	400.0	406.0				65	823.25	829.25
45	408.0	414.0				66	831.25	837.25
46	416.0	422.0				67	839.25	845.25
47	424.0	430.0				68	847.25	853.25
48	432.0	438.0				69	855.25	861.25

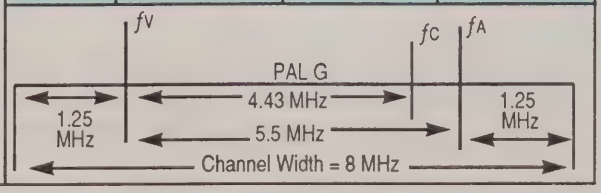


FREQUENCY ALLOCATION CHART
PAL B/G

PAL B			
BAND	CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)
IF	—	38.9	33.4
I	E2	48.25	53.75
	E3	55.25	60.75
	E4	62.25	67.75
L	S1	105.25	110.75
	S2	112.25	117.75
	S3	119.25	124.75
	S4	126.25	131.75
	S5	133.25	138.75
	S6	140.25	145.75
	S7	147.25	152.75
	S8	154.25	159.75
	S9	161.25	166.75
	S10	168.25	173.75
III	E5	175.25	180.75
	E6	182.25	187.75
	E7	189.25	194.75
	E8	196.25	201.75
	E9	203.25	208.75
	E10	210.25	215.75
	E11	217.25	222.75
	E12	224.25	229.75
U	S11	231.25	236.75
	S12	238.25	243.75
	S13	245.25	250.75
	S14	252.25	257.75
	S15	259.25	264.75
	S16	266.25	271.75
	S17	273.25	278.75
	S18	280.25	285.75
	S19	287.25	292.75
	S20	294.25	299.75
	S21	303.25	308.75
	S22	311.25	316.75
	S23	319.25	324.75
	S24	327.25	332.75
	S25	335.25	340.75
	S26	343.25	348.75
	S27	351.25	356.75
	S28	359.25	364.75
	S29	367.25	372.75
	S30	375.25	380.75
	S31	383.25	388.75
	S32	391.25	396.75
	S33	399.25	404.75
	S34	407.25	412.75
	S35	415.25	420.75
	S36	423.25	428.75
	S37	431.25	436.75
	S38	439.25	444.75
	S39	447.25	452.75
	S40	455.25	460.75
	S41	463.25	468.75



PAL G			
BAND	CHANNEL DESIGNATION	VIDEO CARRIER FREQUENCY (MHz)	AUDIO CARRIER FREQUENCY (MHz)
IV	21	471.25	476.75
	22	479.25	484.75
	23	487.25	492.75
	24	495.25	500.75
	25	503.25	508.75
	26	511.25	516.75
	27	519.25	524.75
	28	527.25	532.75
	29	535.25	540.75
	30	543.25	548.75
	31	551.25	556.75
	32	559.25	564.75
	33	567.25	572.75
	34	575.25	580.75
	35	583.25	588.75
	36	591.25	596.75
	37	599.25	604.75
V	38	607.25	612.75
	39	615.25	620.75
	40	623.25	628.75
	41	631.25	636.75
	42	639.25	644.75
	43	647.25	652.75
	44	655.25	660.75
	45	663.25	668.75
	46	671.25	676.75
	47	679.25	684.75
	48	687.25	692.75
	49	695.25	700.75
	50	703.25	708.75
	51	711.25	716.75
	52	719.25	724.75
	53	727.25	732.75
	54	735.25	740.75
	55	743.25	748.75
	56	751.25	756.75
	57	759.25	764.75
	58	767.25	772.75
	59	775.25	780.75
	60	783.25	788.75
	61	791.25	796.75
	62	799.25	804.75
	63	807.25	812.75
	64	815.25	820.75
	65	823.25	828.75
	66	831.25	836.75
	67	839.25	844.75
	68	847.25	852.75
	69	855.25	860.75



LIMITED WARRANTY

Blonder-Tongue Laboratories, Inc. ("B-T"), for a period of three (3) years from the date of original purchase will, as its sole option, either repair or replace (with a new or factory reconditioned product, as B-T may determine) any product manufactured by B-T which proves to be defective in materials or workmanship or fails to meet the specifications which are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing. To obtain service under this warranty, the defective product, together with a copy of the sales receipt or other satisfactory proof of purchase and a brief description of the defect, must be shipped freight prepaid to Blonder-Tongue Laboratories, Inc., One Jake Brown Road, Old Bridge, New Jersey 08857.

This warranty does not cover damage resulting from (i) use or installation other than in strict accordance with manufacturer's written instruction, (ii) disassembly or repair by someone other than the manufacturer or a manufacturer-authorized repair center, (iii) misuse, misapplication or abuse, (iv) alteration, (v) lack of reasonable care or (vi) wind, ice, snow, rain, lightning, or any other weather conditions or acts of God.

In some cases, the warranty on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in B-T products (including, without limitation, VideoCipher IICM™ commercial descrambler modules) are of shorter duration or otherwise more limited than the standard B-T limited warranty. In such cases, B-T 's warranty with respect to such third-party proprietary sub-assembly modules will be limited to the duration and other terms of such third-party vendor's warranty.

OTHER THAN THE WARRANTIES SET FORTH ABOVE, B-T MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE CONDITION, DESCRIPTION, FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR AS TO ANY OTHER MATTER, AND SUCH WARRANTIES SUPERSEDE ANY ORAL OR WRITTEN WARRANTIES OR REPRESENTATIONS MADE OR IMPLIED BY B-T OR ANY OF B-T EMPLOYEES OR REPRESENTATIVES OR IN ANY OF B-T'S OTHER BROCHURES, MANUALS, CATALOGS, LITERATURE OR OTHER MATERIALS. IN ALL CASES, BUYER'S SOLE AND EXCLUSIVE REMEDY AND B-T'S SOLE OBLIGATION FOR ANY BREACH OF THE WARRANTIES CONTAINED HEREIN SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT F.O.B. SHIPPING POINT, AS B-T IN ITS SOLE DISCRETION SHALL DETERMINE. B-T SHALL IN NO EVENT AND UNDER NO CIRCUMSTANCES BE LIABLE OR RESPONSIBLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, PUNITIVE, DIRECT OR SPECIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT LIABILITY OR OTHERWISE OR ANY OTHER LEGAL THEORY, ARISING DIRECTLY OR INDIRECTLY FROM THE SALE, USE, INSTALLATION OR FAILURE OF ANY PRODUCT ACQUIRED FROM B-T.

All claims for shortages, defects and non-conforming goods must be made by the customer in writing within five (5) days of receipt of merchandise, which writing shall state with particularity all material facts concerning the claim then known to the customer. Upon any such complaint, the customer shall hold the goods complained of intact and duly protected, for a period of up to sixty (60) days. Upon the request of B-T, the customer shall ship such allegedly nonconforming or defective goods, freight prepaid to B-T for examination by B-T's inspection department and verification of the defect. B-T, at its option, will either repair, replace or issue a credit for products determined to be defective. B-T's liability and responsibility for defective products is specifically limited to the defective item or to credit towards the original billing. All such replacements by B-T shall be made free of charge f.o.b. the delivery point called for in the original order. Products for which replacement has been made under the provisions of this clause shall become the property of B-T. Under no circumstances are products to be returned to B-T without B-T's prior written authorization. B-T reserves the right to scrap any unauthorized returns on a no- credit basis. Any actions for breach of a contract of sale between B-T and a customer must be commenced by the customer within thirteen (13) months after the cause of action has accrued. A copy of B-T's standard terms and conditions of sale, including the limited warranty, is available from B-T upon request.

VideoCipher IICM is a registered trademark of General Instrument Corp. You may obtain a copy of the limited warranty covering third-party proprietary sub-assembly modules from Blonder-Tongue.

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Toner Cable Equipment, Inc. is a US firm located in Horsham, Pennsylvania, about 90 miles southwest of New York City.

Toner Cable Equipment, Inc. is the largest stocking distributor of Blonder-Tongue products worldwide. We have provided our customer's immediate delivery of Blonder-Tongue products from our extensive stock for over 20 years.

We were founded in 1971 by Robert L. Toner as a distributor of high technology Cable Television products. We stock a broad array of products from over 70 manufacturers from antennas to spectrum analyzers.

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Telephone: +1-215-675-2053 Fax: +1-215-675-7543 FREEFONE from the UK: 0800-894969

Toner
cable equipment, inc.

969 Horsham Rd. • Horsham, PA 19044 USA

Telephone: +1-215-675-2053
Fax: +1-215-675-7543
FREEFONE from the UK: 0800-894969

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